SOUTHERN
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SOUTHERN TEXTILE BULLETIN

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Internationalizing Of Cotton Trade

"HOW the Cotton Industry Was Internationalized," is the title of an article by Sir Charles W. Macara, Manchester cotton magnate, in the August number, just issued, of the "American Federationist." This article was written at the request of the American Federation of Labor, of which the Federationist is the official organ.

Sir Charles traces the steps leading up to the formation of the International Federation of Master Cotton Spinners' and Manufacturers' Associations, of which he was president from its formation, in 1903, until 1915. He also comments on relations of employer with labor.

"No more laudable object can be imagined than the one the 'American Federation' has set before itself of bringing about a better understanding of the international basis upon which industries are organized and of the international scope of influence in the economic field," Sir Charles says. "Hitherto, the indifference of the great body of workers to economic influences which are at work outside the factory walls has been a great stumbling block to progress and prosperity.

"Everything that affects the employer in the conduct of his business must affect the wage earner as much if not more, but I have frankly to acknowledge that there is less inclination shown in my own country to adopt the viewpoint of mutual interest than there appears to be in the States. An instance of this cooperative spirit, I regret to say, has never come under my notice on this side of the Atlantic so far, the workers, on the other hand, too often taking up the attitude that the question is one that concerns the employer only, while, as a matter of fact, it concerns the wage-earner infinitely more, seeing that he is hit far harder than the employer can be by the contract having gone past the firm.

"When I pass this criticism, I am not unmindful of the generous part that cotton operatives have taken in the past on matters of broader interest than the domestic ones of wages and hours.

"At the end of 1903, when, at a time when American cotton supplies were low, a deliberate attempt was made by the notorious American speculator, Sully, and others, to 'corner' the cotton crop of the Southern States and hold up the whole trade of spinning and manufacturing to ransom. The operatives in Lancashire at that time cheerfully submitted to the hardships entailed in a voluntary reduction of labor in order to defeat the aims of these unscrupulous speculators and victory was achieved.

"Then arose the question of what could be done to prevent a recurrence of a situation which, despite all that had been done to combat the designs of the gamblers, had rushed the price of the raw material to such a height that the industry had been reduced to a state bordering on paralysis.

"The English cotton trade at that date employed in spinning and weaving about 500,000 operatives. In subsidiary industries and employments connected with cotton another half-million were engaged, while the numbers mentioned could be multiplied many times over if we took into account the various industries in England so largely dependent on the successful running of the cotton trade, and the dependents of the employees.

"I proposed a scheme of curtailing consumption, with the object of allowing a substantial portion of the 'cornered' cotton to lie as dead capital on the hands of the speculator. My proposal of a reduction of hours of working meant that while employers would be saved from insolvency, the operatives would retain two-thirds of their normal wages over a period of 12 months, instead of receiving full wages for two-thirds of the year and none at all for the remaining third, as would have been the case had we taken no drastic action to meet the situation. The leaders of labor at once fell in with the scheme.

"Thirty years before that, when Lancashire consumed three-quarters of the American crop, it might have been feasible for England to fight out the matter single-handed, but whereas in 1873 the entire cotton crop of America averaged some 3,500,000 bales, it averaged about 11,000,000 bales in 1903, and many other nations had entered upon the business of producing cotton goods.

"Consequently, it being clear that the development of the cotton industry throughout the world had made it essential that there should be international combination to meet such situations as had then arisen, the general committee of the Master Cotton Spinners' Federation, at a meeting held in Manchester, in December, 1903, decided to cable all continental and American associations of cotton spinners, suggesting general short time working in the cotton spinning trade to check speculation in the raw material.

"The call did not at once meet with universal approval. Austro-Hungary, Italy, Belgium and France were more favorable than Germany and the United States but a number of the countries fell into line on the matter of short time to defeat the particular trouble in hand and gave their warm-hearted adherence to a proposal for establishing a permanent international body to deal with all questions likely to improve the status and contribute to the welfare of the cotton industry in all countries.

"In due time cotton spinners had the satisfaction of seeing Sully and his confederates forced to throw their cotton upon the market. But this was not enough. It still left the cotton trade vulnerable to every attack that speculators cared to make on it.

"At the Lancashire meeting which backed the proposal to reduce the working week, messages received from American and European spinners showed that an international movement was possible if we had but the means of bringing such an organization together. I recommended that the English Federation of Master Cotton Spinners should call an international congress. The replies were favorable and the place chosen was Zurich. The Swiss Cotton Employers' Association was asked to act as joint conveners and the gathernig took place May 23, 1904. Out of the deliberations grew the International Federation of Master Cotton Spinners' and Manufacturers' Associations, which was formally established at a second assembly in the year following in Manchester, which became the headquarters of the movement.

"Every cotton-using country either joined this Federation or co-operated with it, and each year, since its inception, except during the war period, the members have met in congress in the various capitals of Europe, or sent delegations to America and Egypt to study cotton growing conditions on the spot.

"There is one aspect of this international enterprise that I should like to have understood clearly. The Federation has never in any sense been concerned in creating monopolies or making itself into a close corporation for the purpose of extorting high profits, and thus conspiring to penalize the consumer. It has never been a price-fixing organization, but has existed simply for the purpose of securing unity on matters of high policy, the trade remaining as competitive as it was before the Federation came into being. What we have sought to bring about are just those things which would benefit the wage-earner as much if not more, than the employer. We have sought, first of all, to secure ampley supplies of the raw material at a reasonable price, which must, of course, be in the interest of full and regular employment of spindles and looms; we have endeavored to equalize conditions of labor in the various countries; and we have especially sought to ameliorate the conditions under which a great many of the unorganized operatives, particularly in the Far East, have for years been obliged to work.

"I have noted with regret a decidedly reactionary tendency on the part of some of its members, particularly in the matter of hours of labor. Their argument is that the conditions resulting from the war, and the cheapness of labor in hte Far East make it necessary for England to go back to the pre-war working week if she is to hold her former place in the scheme of things, which is quite a misconception of the whole situation.

"I should be extremely sorry to see any backward step taken on either the question of hours or any other which affects the comfort and the welfare of the worker.

"Speaking personally, I may say that internationalism has long claimed my most active sympathy, and I have set forth, in season and out of season, the value, politically, socially and industrially, of international co-operation and interdependence. In these days, there can be no splendid isolation for any country, either in politics or industry. The world has become too small for that. We shall be obliged in future to look at things from the international standpoint, whether we like the idea or not; but I, myself, believe that that is the true course and that the greatest of good will ensue from following it."

Cotton and Dyeing From a Chemist's Point of View

(Continued from last week)

Address by Percy Bean, before British Association of Managers of Textile Works.

It seems that dye solutions contain the dye particles in a finely divided condition, but that these particles are aggregated together in groups and it is probable that any one dyestuff will have groups of more or less uniform size. The larger the size of the aggregate, the slower will the dyestuff penetrate the fibre. By the use of a solution of gelatine, in the form of a stiff jelly, the relative sizes of the particles of various dyestuffs have been studied, and it is found that acid and basic dyes diffuse at approximately the same rate, but those having relatively large aggregate dye cotton readily.

Some direct cotton dyestuffs will dye wool as well as cotton, and many of them yield shades of a different tone on wool. When cotton is dyed and the shade of the bath examined, the residue is found to be of different tone to the original bath. This seems to indicate that the original dyestuff solution contains aggregate of various size, and the smaller ones do not dye the cotton but will dye the wool. Probably when wool and cotton are dyed together the wool will absorb the smaller particles. The differences in shade are no doubt due to the appearance of the different sized particles.

It is suggested that the aggregation of the dyestuffs may be affected by their mode of manufacture, and that might explain the difference in tone of different batches of the same dyestuff. It may explain also the differences in tone sometimes found when dyeing successive batches of material in a standing dyebath.

There are many reasons for variations of shade in dyed cotton materials, some of which are not connected with the manner in which the dyer has carried out his work. Of course, many faults are found which are due to carelessness on the dyer's part, to faulty dyeing machinery and to wrong finishing, but some things are beyond the sphere of the dyer.

There are certain cases due to the cotton itself which lead to bad results in dyeing, and others which are manufacture.

First, there is a difference in dyeing properties of various growths of coton. It has been known for a long time that if different cottons are mixed in a fabric there is a likelihood of unevenness apeparing after dyeing, even with bleached cotton.

Experiments have been carried out which enlarge upon and explain this trouble. It was found that when cottons from different sources were bleached in the same manner, to avoid the influence of the natural shade of the material, that different depths of shade were produced on dyeing with various dyestuffs. The results show that the difference was not due to differences in the chemical properties of the cottons, as the order for all the dyes was the same. The darkest shades appeared on Indian cotton, followed by American, Texas, Egyptian, Uppers, Egyptian Sakel, West Indian and Sea Island. This led to the theory that the differences in shade of various dyed cottons were due not only to fabric structure but also to differences in structure of various growths of cotton hairs, such as the thickness of the cell wall. This might also explain the light shades found in the case of dead cotton, which has abnormally thin walls. Assuming that the weight of hair due to the mechanical treatment in per centimetre is an index of the wall thickness, experiments were carried out which confirmed the theory. It was not claimed, however, that wall thickness was the only structural difference which influences the dyed shade. It is suggested that the difference in level-dyeing properties of combed Egyptian yarn and Indian cotton is due to both difference in yarn regularity and variation in the regularity of the hair wall.

Partially degraded cotton has an increased affinity for basic dyes and the methylene blue absorption is used as an index of the state of degradation into oxycellulose and hydrocellulose. Apart from this use, the absorption of methylene blue throws light on the state of the cotton. The absorption related to the origin of growth, to the impurities in the cotton and the alkalinity of the mineral contents. It is claimed that the efficiency of a scouring and bleaching process may be estimated for any particular type of cotton, since the absorption is found to be proportional to the alkalinity of the ash. Of course, the methylene blue absorption is not affected by the extraction of cotton with organic solvents, because these do not remove the mineral matter. Over-chemiking or insufficient scouring leads to a high absorption, but the cause can be determined by scouring and again estimating the methylene blue absorption after the first estimation. If the absorption is lowered, then the material has been insufficiently scoured, and if it is hardly changed, over-oxidation is probable.

An experienced bleacher can usually tell, by the appearance of the material and the brightness of the bleached fabric in various stages of the process, whether his cloth will be well scoured and undamaged. It is doubtful whether the average bleacher would go to the trouble of carrying out such tests, but they are certainly of interest and probably of value to a textile chemist.

In weaving, it sometimes happens that when one kind of yarn has run out, a new lot o fyarn spun in the same way, but from a different growth or mixing of cotton, may be used. If this is subsequently dyed a difference of shade between the two kinds of cotton will probably be found. Similarly, inefficient mixing of cottons may lead to general unevelness. It is suggested that this trouble may be avoided by mixing only cottons of approximately the same wall thickness. In dyeing grey fabrics, the shades will naturally vary with the color of the cotton, but bleaching will not remove this effect complectely, although the dyeing properties may be changed.

Since light reflection from the surface of a fabric is of great importance, it follows that faulty places in the fabric will usually be rendered more visible after dyeing. A slack or tight thread shows very clearly in a dyed fabric, and so do places where the yarn has been pulled up more tightly in some places than others, a striped appearance is clarly seen after dyeing.

Not long ago I examined a piece of very wide cloth which had been dyed brown and which was to be proofed for raincoats. Because the manufacturer had no sizing machine which would take a sufficiently wide beam, the warp had been sized on narrow beams, and two of these were placed in the loom. When the cloth was dyed it was found to be divided down the middle into a dark and light portion. This fault had arisen simply because the tension on each beam had not been exactly the same. The warp in one side of the cloth was slightly tighter than the other, causing the light to be reflected differently from the two portions, and making one appear darker than the other.

Apart from differences due to various growths of cotton, the twist of yarns is very important in dyeing, and it has been demonstrated that a difference of two turns of twist in sixteen made a considerable difference in the apparent depth of the dyed shade. This is largely due to light reflection. When yarns are tightly twisted and there is a variation in the twist, different shades may be obtained owing to differences in the penetrative power of the dye in the differently twisted yarns. When mixed yarns of this kind are put into a fabric, they are easily seen when dyed. Abnormally thick yarns are also clearly seen, and many pieces have been spoiled by the accidental mixing of different counts of warp.

The presence of dead cotton, which shows as light-colored specks, will invariably spoil a dyed fabric. I believe some spinners are in the habit of putting a fairly high percentage of waste into their cotton mixings, and since the waste usually contains a large proportion of dead cotton, fabric made from such yarn is of little value for dyeing.

Just as it has been shown that the extraction yield of fatty matters in cotton by organic solvents is increased by mechanical pulverization, it has been shown by Hubner that the absorptive power for basic dyestuffs is increased by similar treatment. This appears to be due to the greater surface exposed by the beaten cotton. The effect of increased surface area and size of pores in mercerized cotton no doubt plays an important part in its greater absorption of dyestuffs than that of ordinary cotton.

There is insufficient time to describe in any detail the different types of dyestuffs and their application to cotton, and I must confine myself to a very brief outline.

The chief methods of coloring cotton, apart from printing, are few in number, although they involve a considerable number of compounds. First, there is immersion of cotton in solutions of dyestuffs having a direct affinity for cotton. This means the direct cotton colors, which include several types of chemical compounds. These have a good but variable affinity for cotton, but the dyebaths do not exhaust well, and the colors are not very fast when dyed. Then there is the method of impregnating the cotton with an organic or inorganic mordant which serves to attract and fix the dyestuff on the fibre. This method involves the use of metallic mordants, with such compounds as alizarine for the production of fast shades. By mordanting methods it is possible to fix basic and acid dyestuffs on cotton, for which they have normally little or no affinity. For instance, basic colors are dyed by fixing an acid mordant, such as tannic acid, on the cotton and then dyeing with the basic color. All insoluble colored lake is formed by the mordant and dyestuff, which is thus fixed on the fibre. Acid dyestuffs may be dyed on a basic mordant on cotton, but they are rather too fugitive for general use in this way.

Another and very important coloring method is that in which the cotton is impregnated with substances which are converted to insoluble colored bodies within the fibres. An example of this is the after-treatment of coton by certain direct cotton dyestuffs by diazotizing them and coupling them with a base to form a new and less soluble compound on the fibre.

More important is the method of impregnating the cotton with an organic compound and oxidizing it on the fibre to form a colored compound. In this way aniline black is produced by impregnating the cotton with aniline and oxidizing means.

The production of insoluble azo colors is also of great importance. These include such colors as para red and naphylamine claret and the naphthol AS series of compounds. The cotton is impregnated with a substance such as an alkaline solution of B-naphthol, A-naphthlylamine or an arylide of B-hydroxy naphthoic acid. This is converted to an insoluble coloring matter by the addition of a diazotised amine such as para nitraniline.

The fixation of such compounds as these appears to be purely mechanical in character, and the cotton acts simply as a pigment carrier. A further method is that in which the dyestuff is applied in a reduced form, which is capable of being absorbed by cotton. The impregnated cotton is withdrawn from the solu-

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Purifying Water

IN order that water may be suitable for use in textile operations, particularly bleaching and dyeing, it is highly desirable that it conform to the following specifications:

A. It shall be free from suspended matter.

B. It shall be soft.

C. It shall be free from iron.

D. It shall be colorless.

These requirements are perhaps not entirely independent, says J. F. Springer, in the Rayon Journal. For example, if water is completely freed from suspended matter, it is rather likely to be colorless. However, for the purpose of emphasis at least, let the four specifications stand.

The arrangements of nature are wonderfully adapted to provide pure water—that is, water conforming to the listed specifications. Nature's great water reservoir — the oceans and seas—contain water that is notably impure. Sea water is contaminated by dissolved material and undissolved solids.

Land Water.

Land water comes from the clouds and the water in the clouds comes from the oceans. That is to say, water is evaporated from the surface of the seas, later on to become more or less aggregated into great and small masses of mixtures of air and moisture. These masses are the clouds.

At the moment the water is evaporated from the surface of the oceans, it is quite pure. If the atmosphere above is contaminated, the clouds will likely retain a certain amount of impurity. But, if the air over the oceans is itself clean, the moisture in the clouds will be pure. The cloud-water is precipitated upon the land in the form of rain, snow or hail. If the atmosphere through which it descends to earth is not contaminated, then pure water in the clouds will still be pure water when it reaches the surface of the earth.

This natural phenomena is based on the distillation process. It is perhaps the best of all known processes for the complete purification of water. When the atmospheric conditions are right, the product is an exceedingly pure water—a water highly suitable for use in the rayon industry, particularly in the manufacture of the fiber and of dyestuffs and in the dyeing of rayon yarn and rayon piece goods.

Artificial Distilled Water.

Distilled water may, naturally, be prepared artificially. Under such conditions, contamination can be prevented and a highly pure product produced. In fact, the artificial distillation of water for commercial use, at a comparatively reasonable cost, is now can accomplished fact, and distilled water may be produced in quantity at moderate expense.

This is, perhaps, hte very best procedure for the production of pure industrial water. The cost, as already said, is moderate; though perhaps it is cheaper in many cases to employ other methods.

This is, perhaps, the very best that many waters exist which already conform to certain of the specifications and which may readily be treated to make them satisfy the remaining requirements. Moreover, industrial water does not always need to be absolutely pure. It may often contain dissolved material and still be very suitable for its industrial service.

In fact, one of the most modern methods for the softening of water does not produce a pure water by any means. Nevertheless, the resulting soft water, despite its content of dissolved impurity, is well adapted to many industrial processes.

Pure Water for Textile Purposes.

Water used for textile purposes may be purified in other ways than by distillation. The first step is the removal of suspended matter. Such material may be present in the water supply because the water after precipitation from the clouds has encountered organic and inorganic substances and is carrying them as undissolved solids. Sometimes, suspended material may be due, in part, to dust and the like in the air through which the rain, snow or hail passed in descending from the clouds. The removal of suspended matter is ordinarily accomplished by such procedures as settling, agglomeration and filtration. Nature often provides for the elimination of suspended solids by natural means, that is, the water is caused to drop larger bits of sediment in natural settling basins; and it is frequently filtered by its passage through previous soils and deposits.

Removing Dissolved Matter.

Where the objection to a water supply arises from its content of dissolver matter, chemical means are often applied by way of correction. Calcium and magnesium salts dissolved in water make it a hard. Softening consists in removing these salts or in rendering them unobjectionable. Simple boiling brings about precipitation of certain hardness elements. These settle and are thus removed from the water. Hardness removable by boiling is termed temporary hardness. The remaining hardness—that is, the permanent hardness—is oftentimes dealt with chemically. Thus, the dissolved substances causing the permanent hardness may frequently be converted by chemical means from magnesium and calcium salts into sodium salts. The water becomes soft and is suited for many industrial uses without further treatment. There is a certain amount of impurity, but it is unobjectionable for many purposes.

The artificial softening of water is carried out for two distinct lines of service in the textile industry. First, water destined for boiler use is softened in order to avoid difficulties of boiler operation. Thus, the natural water at the plant may contain dissolved material of such a nature that incrustations would be formed in the boiler. As the rayon industry employs steam for various uses, the softening of boiler water is import-

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How Can I Prevent Roving Waste?

This is the question that was received by Fibre and Fabric: "How about preventing the waste of roving caused by the spinners taking out the bobbins much too soon before they run out? Will some of your readers thresh out this question in good shape and save the cotton mills an enormous loss on account of re-working so much needlessly wasted roving? It is well known that re-worked roving does not make as good work; that it costs as much more to re-work roving waste as it does when first put through, besides making additional wastes when re-worked. Moreover, the finished product made from excessive roving waste re-worked is not of such good quality, nor possesses as much strength as when made from normal stock. Therefore, I would like to learn what other mills are doing to prevent the excessive waste of roving?"

Answered in Fibre and Fabric May 7, 1927

This is the answer that appeared in Fibre and Fabric: "I have not written for Fibre and Fabric in a long time, so will try to answer one of your questions now. How to save roving waste and also how to save the roving bobbin in both carding and spinning rooms. I have always kicked about help cutting waste from bobbins, as they always made a lot of waste. Oftentimes if they had a lot of roving waste running out, help would, if not watched, take out a bobbin with three to five layers of roving on it and cut same from bobbin, in that way making a lot of cut waste, besides cutting the bobbin, which helps to spoil same. Now the only and best way to save both bobbin and cut waste is for mills to buy some machines from the Terrell Machine Co., and then not allow any more cut waste in any department. You can save 25 per cent up to better than 50 per cent waste by not allowing help to take out a bobbin from creel with more than two inches of roving left on bobbin. Hold roving men responsible if they pick up bobbins with more than that on them. The Terrell machine will clean fifty bobbins a minute and any overseer can tell his superintendent how many machines he will need. I have six at the present time, and do not pay more than 27 cents an hour to help to run the machines. A machine will pay for itself in a short time. It is up to the agents or superintendents of mills whether they want to save roving bobbins and cut down 50 per cent in waste they are now making. I consider it a great saving to any mill as waste is a very expensive luxury in these times.—Sportus."

German Textile Activity

(Reprint from Manchester (Eng.) Guardian)

The German textile industry offers in almost all branches a picture of steadily growing activity. Complaints are constantly being made concerning the need of skilled operatives, and prices continue to rise. Unemployment among textile workers amounted to 4 per cent at the end of April as compared with with 5.5 per cent at the end of March, and the promotion of underemployed to 3.4 per cent at the end of March. A further improvement will probably be visible when the figures for May are published.

Liveliness is most noticeable in the cotton industry, where demand has been receiving a further stimulus from the gradual rise in raw material prices. It is recognized, particularly in the retail trade, that if the public demand maintains its present activity a noticeable scarcity will exist in various goods during the autumn. German cotton spinners are sold out for the next six or seven months, and the average manufacturer has work for at least three to four months. Activity is particularly strong among manufacturers of grey cloth, whose orderbooks are filled right up to the fourth quarter of the year, and some of them are already quoting for deliveries during the first quarter of 1928.

In the circumstances it is particularly interesting to find that German cotton manufacturers are coming out once more with a demand for a higher tariff. At the general meeting of the Union of South German Cotton Manufacturers the Customs duties were described as insufficient, and the demand was made not only that further tariff concessions should be refused for yarn and cloth in any commercial treaty negotiations but also that the Union should agitate for a stronger measure of protection in the final settlement of the tariff. This demand has met with some opposition in other commercial quarters. It is pointed out that every acceleration of trade activity illustrates the effect of the loss of Alsace on the ability of the German manufacturing plant to satisfy the normal German demand for cotton goods. This is doubtlessly true about the finer goods, the internal demand for which is far from being covered by the German manufacturer.

It is significant that just as in the year 1925 Germany will suffer from an autumn scarcity of cotton goods. In 1925 the result was an enormous import which favored the British industry. The question of a possible rise in the cotton goods tariff will probably not be decided in the near future, and it seems that British manufacturers will not do bad business during the next few months if they cultivate their German customers and lay down stocks in Germany.

The state of employment in the colored goods trade is not so active as the German consumption of colored goods is much smaller than it was formerly. Several manufacturers of colored goods have consequently changed on to the production of bleached goods, and in this department have been able to secure considerable orders. The demand for underclothing is remarkably strong in Germany. The output of many plants for these qualities has been sold up to the end of December, and the activity of the industry is reflected in the dyeing and finishing branch. Almost everywhere cotton weaving sheds are working overtime, and in several cases where skilled operatives are available they are working more than one shift.

It is noticeable that the cotton goods trade has derived only partial profit from this favorable development. The merchant has found that prices have run away too quickly and too permanently from him. He incurred great loss last year through the fall in prices, and this year it will be difficult for him to obtain from the retail trade sums which will suffice to purchase a quantity of goods similar to that just sold. In other words prices have risen too fast, and though conditions are much more favorable than they were last year the loss in capital and the increase in direct trade between manufacturer and retailer has considerably reduced the importance of the merchant.

The woollen industry is also actively employed. In the first flight worsted manufacturers booked large orders for autumn and winter deliveries, so that the recent strong demand for summer clothing will be followed by another few months of full employment. The woollen industry has undoubtedly benefited from the rise in wool prices since the end of last year, and the temporary reaction of the London wool auctions has not been enough to affect the demand. It is true, however, that worsted spinners have limited their purchases of tops in order to await developments on the wool market. They must admit, however, that since they have sufficient raw material for the moment, and since the German combers are fully employed for several months, further imports of tops will be necessary in the near future.

The silk and velvet industry is still suffering from the effects of the appreciation of the lira, and consequently is noly dealing cautiously in raw materials. At the same time, owing to the strong demand for silk

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Double Production From Loom

ABOUT a year ago the German trade press discussed an entirely new method of weaving which had been invented by Walter Nicolet, a well-known Leipzig engineer. This invention was applied to a model loom for weaving narrow bandages which produced a far greater output than weaving in the ordinary way. The simplicity of working and the greater production obtained made Mr. Nicolet continue his efforts and expand his method to make it suitable for the production of wider cloths. The new loom for approximately 67 inches grey width, for fabrics such as cover cloths and jute cloth, does about the same picks as an ordinary loom, but works with two sheds, one behind the other. Thus a double production is obtained, the weft being shot through the two sheds simultaneously.

The loom is fed as follows: The warp ends are led through two bars forming combs with guide-holes for the ends, a closed shed being thus created, behind which is an open shed, which remains there permanently. Figure 1 shows the insertion of the pick with the beater-up inactive, and Figure 2 shows the beat-up taking place. The shed-forming comb which is nearest the fabric serves at the same time as a running basis for the shuttle, which is being sent up by upper and lower push through the closed shed. A stationary lay serves as holder for the shuttle. In front of the lay under the warp there is an open reed, casting the weft to the fell of the fabric. In the open shed, which is behind the closed one, there is a tube built in, adopted to guide the shuttle through the open shed both ways, the weft being drawn off a stationary spool. As soon as the shuttle has passed the closed shed the open reed brings the weft to the fell of the fabric. At the same time the combs for the warp separate the two warp groups from each other. The closed shed is dissolved and the weft in the open shed is then

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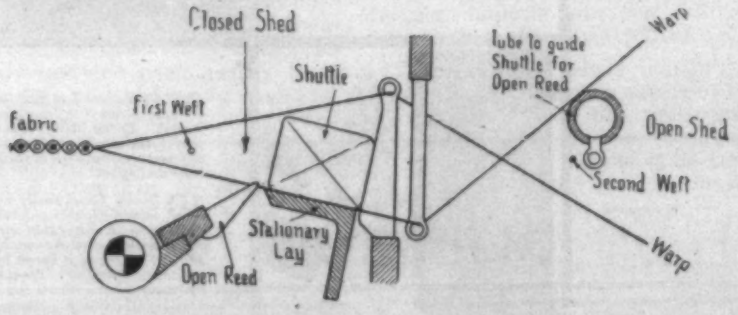


Fig. 1.

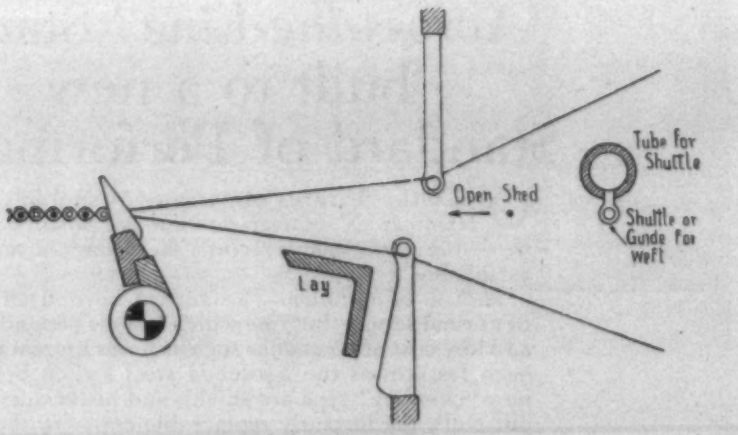


Fig. 2.

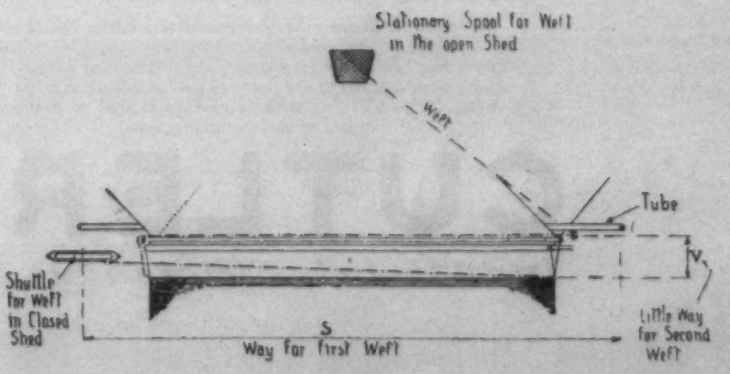
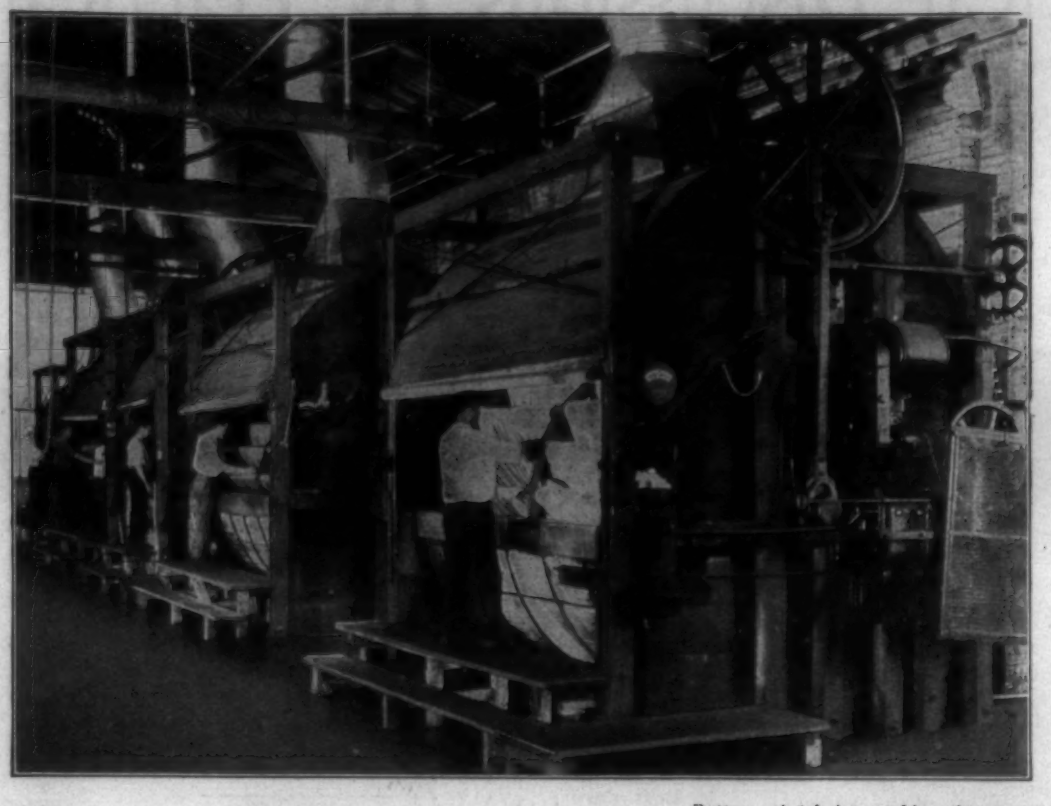


Fig. 3.



Battery of 5 hoist machines for mercerized cotton in the Boger and Crawford Plant, Philadelphia.

Hoist Machines for Rayon or Natural Silk, Mercerized Cotton or Combination of Various Processes

In these hoist machines the reel may be lifted clear of the dye liquor for matching, adding color, and so forth.

The reel is always in contact with the drive and can be revolved in raised position and while being raised or lowered into the bath.

The yarn-carrying frames are phosphor bronze with monel metal rivets and guard rails—the tub which provides support for monel metal lining and insulation is of wood. We shall be glad to go into full details of any Butterworth Klauder Weldon Machine, and you in turn know that all products of this combined organization have behind them ample years of experience in the designing and construction of textile finishing machinery.

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Practical Discussions By Practical Men

The Practical Discussion Department of the Southern Textile Bulletin is open to all readers whether they are interested in seeking information on technical questions or are willing to help "the other fellow" who has experienced trouble in some phase of his work.

The questions and answers are from practical men and have often proved extremely valuable in giving help when it was urgently needed.

The interchange of ideas between superintendents and overseers develops a great deal of worth while information that results in much practical benefit to the men who are concerned with similar problems.

You are invited to make free use of this department and to join in discussing various problems that are mentioned from week to week. Do not hesitate because you do not feel that you are an experienced writer. We will take care of that part of it.—Editor.

Bale Breaker Platform.

Editor:

When buying a bale breaker, is it best to have the automatic feeding low platform, or to have simply a hopper to feed by hand.

Breaker.

Is it best to have only a hopper on a bale breaker or to have a self-feeding platform as inquired of by Breaker?

The answer to this question depends upon other things aside from the bale breaker. If there is an abundance of room, it will be better to have the automatic platform to feed into the hopper. There is also a regulator which goth with platform and connected therewith in such a manner as to regulate the flow of the cotton into the hopper. The self-feeding platform together with this regular is important because it will prevent the overfilling of the hopper, and in turn prevent choking and breaking the traveling aprons.

But where the picker room is cramped for room, and there is a very careful picker man taking care of a small picker room, the operations may be safely and satisfactorily conducted without a self-feeding platform. Regulator.

Answer to Bill.

Editor:

Regarding Bill's question on how to brush cloth on both sides at one passing through an inspection machine and still have the cloth be moving toward the inspector? There are several different ways of accomplishing this desired feature. The cloht may be passed through a cleaning chamber in which revolving brushes are located on each side of the cloth. After this process, the cloth may be passed on over the inspection table toward the inspector without interruption.

Supt.

Gear Keeps Breaking.

Editor:

Will some expert picker room man advise me why it is that one particular gear breaks several times during the year without any apparent cause. What is the best way to check this down to prevent this trouble? Picker Boss.

Picker Boss wants to know what is the best way to check up his pickers so as to prevent the frequent breaking of a particular gear.

The above question has caught my eye because I have had a similar experience. One gear on a picker kept breaking for no apparent cause cause whatever. I decided to tear down the entire picker head and search for something further back which might be causing the trouble. This led me to discover the whole mischief. One of the bearings into which the small fluted roll revolves and which received the cotton from the cage was badly worn out. This caused the roll and gear to lift out of place whenever there was an unusual lump of cotton to pass thru, and when the roll lifted, the gear on the end of the roll would catch on the casting in its path back of it and, of course, when this occurred, the gear which offered the least resistance would be broken. I therefore fixed up all of the bearings and the gear has not broken since.

Boss Carder.

Cleaning Cotton at the Cards.

Editor:

Does it pay to put on auxiliary cleaners on cards to super clean cotton over and above the picker cleaning process and the regular cleaning process to which cotton is subjected by the cards without extra cleaners? Maryland.

Maryland has asked for information as to whether it is advisable to add auxiliary cleaners on cards to supplement the regular processes of cleaning when passing through pickers and cards. May I be allowed to advise Maryland that, in my opinion and experience, the card is not the place to do any extra cleaning of the cotton. All cotton should be sufficiently cleaned by having enough picker processes to thoroughly clean the cotton before it reaches the card. Carding engines should be confined to performing the functions of laying the fibres parallel and to automatically remove such short fibres and other objectionable substances as the card can naturally accomplish when properly set and operated without putting on any kind of extras or auxiliary cleaners on them. A card kept in good shape and properly operated will accomplish the best results. When the cotton is properly cleaned and presented in well made laps to the cards.

Ind.

Answer to Carder.

Editor:

For the benefit of new carder regarding his question, "Why are card licker-ins not set down to the cylinder and is 10-1000 as close to the cylinders as can be set and make good work? Will say that with very fine clean cotton, for fine work, and a low production per card, licker-ins can be run as close as 7-1000 to the cylinder. But for the ordinary grades of cotton, for coarser goods and a rapid production closer than 10-1000 would be detrimental. This is because the coarser cotton and the more rapid heavier feeding of some is more likely to clog the passage way when set closer than 10-1000. Card Setter.

Some Properties of Viscose Process Yarn

THE properties of viscose process yarn and the general methods of handling all rayons have been discussed frequently, both by the general press and in this bulletin.

A. L. Wykes, in a paper printed in a recent issue of the Journal of the Textile Institute, covers many of the physical properties of viscose yarns, paying particular attention to some of their peculiarities.

Effect of Tension—If the pull on the ends of a length of rayon yarn is gradually increased, at first there is little stretch but after half the required pull to break it is reached there is a large and increasing stretch for each increment of the increasing tension, until, when the stretch is about 20 per cent of the original length the filaments break more or less together. The critical point of half the breaking stretch is very interesting because the properties of rayon which have not been subject to a greater tension than this are quite different from those of a similar yarn which has been strained by a tension of a greater amount even though this was some time previous.

When the yarns are stretched a fraction of the total stretch some of the stretch will be recovered. The percentage recovery or elasticity varies, and, up to the yield point of half the breaking strength, is up to about 80 per cent.; while above the elasticity decreases to 30 per cent.

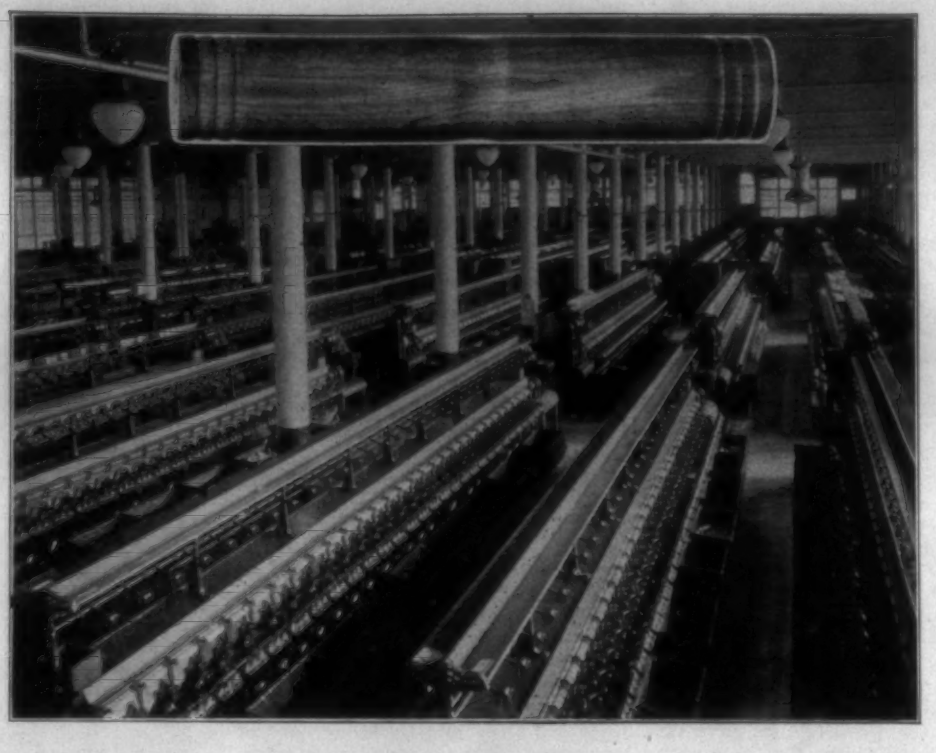
When the yarn is subjected to a tension above half its breaking strength it is stretched beyond its elastic limits and three things happen. First, there is a permanent loss of extensibility; second, the thread becomes less flexible and requires more tension to break it; third, the elastic limit is raised to the applied tension. For example, if 150 denier is subjected to a tension of 5 ozs. by winding or weaving there will be, while under tension, a stretch of 10 per cent, of which one-third will be recovered when the tension is removed, leaving an elongation of about 6.7 per cent. If the same tension of 5 ozs. is again applied the yarn will stretch only 3.3 per cent, and nearly all of the stretch will be recovered upon the removal of the tension. Many weaving faults are due to this raising of the elastic limit and the loss of flexibility through excessive tensioning, and it is clear that strained and unstrained ends will not behave alike when subjected to the same manufacturing process.

Effect of Wetting Strained Yarn—When viscose yarn strained through excessive tension is wetted with water and then dried it recovers practically all of its original stretch. This effect can be seen in manufacturing and weaving. If a number of ends are sized, some of which have been found under heavy tension—caused, perhaps, through entanglement when winding—it will be seen that under some conditions some ends will contract in length in drying and result in unequal tension in the loom. Dampness during the week-end or the night may have the same effect. Fabric containing strained yarn may seem passable when sold but after washing or wetting by rain it may become badly puckered.

Effect of Frictiton—Friction on rayon reduces the capacity of the thread to bear tension, just as excessive tension reduces its capacity of stretch. A very small amount of friction, such as is produced by running a thread round an improper guide, is sufficient to weaken it considerably. Broken filaments are, in the main, the result of friction and not of excessive tension.

Weaving—when viscose is used in the warp of a fabric, one trouble is the appearance of lines running down the length of the fabric due to tight warp ends. If a piece of cloth containing a tight warp end is put under a microscope it will be found that the angle that the tight end makes in bending around the filling is quite different than the angle formed by the end under normal tension. This difference in the angle gives the difference in the amount of light reflected and causes streaks in the warp. Shiners in the filling are caused from the same condition in the reflection of the light.

In conclusion the author stated that there are three good rules that should be observed by all users of rayon (1) all viscose process yarns should be kept dry and warm; (2) operators on winders should be instructed to stretch the skeins very carefully on the hands only; (3) all excessive tension and all friction should be prevented in winding as well as in every other process.



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Visiting Europe

By David Clark

On the morning of June 27th, I had an early breakfast and drove to Walter Pratt's hotel and from there we went to the depot and took a 9 o'clock train for Huddersfield, England, at which place are located the shops of Joseph Sykes Bros., whom Walter Pratt represents in the Southern States of the United States. We were on the fast train for Manchester but changed about twenty miles from Huddersfield.

I do not like the arrangement of the English trains but as far as their operation is concerned it seems to me that they have us beat.

Their trains are low and have the appearance of being less likely to turn over in case of accident. As there are practically no grade crossings in England, the engineer feels free to run on a fast speed and they certainly do operate upon fast schedule.

We had lunch on the train and it was served in courses, as is always the case in England. Mutton was, of course, the chief meat for being a sheep raising country England eats mutton.

We reached Huddersfield about 1 o'clock and went to the George Hotel, where Walter Pratt always stays and where everybody knows him.

Huddersfield is a typical English town with its narrow streets and old buildings and can not claim to be a place of much beauty.

Taking a taxi we reached the plant of Joseph Sykes Bros., which is located some distance from the center of Huddersfield, and were welcomed by Leon Rothery, who is a son of Wm. Rothery, one of the senior directors, and has charge of sales in the Manchester section.

Around the walls of the reception room are pictures of several gentlemen of the Sykes family which started the business and has built it to the position of the largest manufacturer of card clothing in the world.

E. M. Sykes, a senior director and the only member of the Sykes family who is at present connected with the business, was away upon a vacation. I have met Mr. Sykes frequently in the United States and in the South where he is a popular visitor.

At one side of the room was a handsome sideboard and very soon a decanter and glasses were brought out and I was invited to have a drink, but having always been on the water wagon, I had to decline.

Practically every business office in England contains a sideboard and visitors are invited to have a drink just as in this country many offices carry boxes of fine cigars for visitors.

It is the custom of the country and it is not for us to criticise the customs of others.

The English are very conservative drinkers and the custom of offering a business visitor a small drink is merely a matter of courtesy. Coming back on the boat I had been talking for some time to a minister from Australia when he asked me to go with him to get a "Scotch and soda."

To him there was nothing wrong in having a "Scotch and soda" and during my trip this summer I learned to have respect for the customs of other people.

Joseph Sykes Bros. is owned by the English Card Clothing Company, Ltd., which has a number of other plants in England. They do a world wide business and for a generation, Dick Johnson was in charge of foreign sales, except those in the United States and frequently came to Charlotte on his way back from China and Japan. After his death he was succeeded by Mr. Marchant, who has visited Charlotte several times.

Being at Joseph Sykes Bros., my thoughts went back to my old friend, R. D. (Dick) Thomas, who for many years represented Joseph Sykes Bros. in the South.

They have some kind of profit sharing basis and when Dick Thomas gave up the Southern agency he went back to the factory in England so that he could still share in the profits. Later, however, he gave up his connection with the company and for several years prior to his death ran a safe or "pub," as they call them, in a small building adjoining the factory.

Dick Thomas was very popular in the South and will long be remembered.

Entering the plant of Joseph Sykes Bros., I found myself in a very large room devoted to wire drawing and found that there were several similar rooms.

They not only make their own card wire but piano wire and wire for many other purposes.

The wire comes to them about one-quarter inch in diameter. It is in rolls but is called rods. It is, of course, made with a certain chemical composition that long experience has shown to be the best for the purpose.

The wire is fed into an orifice and being pulled through same comes out a smaller size. Some of the machines carry it through two orifices and therefore do a double job at one time.

The wire is put through six or eight times according to the size to be made.

As it gets smaller it becomes so brittle that it has to be annealed before being drawn again.

The annealing process puts the wire through an oven from which it emerges while hot. I was cautioned not to touch the wire as it came out and was told that some visitors, being deceived by the appearance of the wire and not realizing that it was white heat, had had their fingers badly burned.

When the wire is drawn down to the right size it is annealed again and then passes to the tempering room.

They formerly passed the wire over gas flames in tempering and still have three of the gas machines which are used for tempering certain kinds of wire, but they now have a room filled with electric tempering machines by which they can accurately regulate the heat and insure uniform tempering conditions.

After the wire is tempered and polished it passes to a room where it is carefully and accurately sized and is tested for electricity and temper.

I was next shown through a room to which visitors are rarely admitted.

It was the room in which they make the emery wheels for side or plow grinding card clothing.

Rubber was being fed through machines and finally came out on a sheet about ⅛ to ¼ inch thick and dies cut circular disks from the sheets. Most of the disks were about six inches in diameter. A man sprinkled an emery mixture upon the disks and they were then put under pressure and cooked or vulcanized.

When they came out they were hard and true emery disks. I was told that they had by long years of experience developed a special system of making these disks.

Leaving the emery wheel room, we entered the card clothing room. I have in the past seen cylinders and doffers fillet machines, but it was the first time I had seen 800 of them running in one room. They also had many top flat machines in operation and I was surprised to find that they were making top flats from 37 to 45 inches in width.

In the United States most of our cards are 40-inch, but there are a few of 45-inch width. I was surprised to learn that in England and Europe there are a great many 37 and 38-inch cards and that some of that width are still being sold.

I next passed to the grinding room, which was a noisy place.

Every cylinder and doffer, after being made, is placed on a cylinder in an immense grinding machine and is ground with six grinders and a burnisher running at the same time. Most of the grinders are side grinders, composed of the emery disks which they make.

The flats are ground in a sheet in the same way as the cylinder fillets.

Before going to the grinders every inch of the fillets are inspected by women who from long experience have become expert and who can with each kind replace missing or broken wires.

After the grinding all card clothing and flats are again inspected and then pass to the shipping department, where they go to all sections of the world.

The Joseph Sykes Bros. business was developed by the ancestors of E. M. Sykes and has grown under his management.

They manufacture card clothing upon a large scale and have a very fine organization.

As we went through, Walter Pratt, who seems to know everybody in the factory, stopped to tell many of them good-bye, as he was leaving the next morning to visit some cotton mills with me, and did not expect to return to Huddersfield.

Leaving the plant of Joseph Sykes Bros. about 4 o'clock, Dennis Crowther drove us to the home of Mr. Wm. Rothery, which is located in the same part of the town as the shops.

Before entering the house we went across the street to inspect Mr. Rothery's flower garden, which does not adjoin his home, but is on a separate piece of property around which there is a high rock wall.

The English take great pleasure in their flowers and many of them, as was the case with Mr. Rothery, employ gardeners who devote their entire time to cultivation.

On account of the soil and the moist climate, they have beautiful grass and flowers.

Mr. Rothery's garden occupied considerable space and was laid off into neat walks and flowers beds with climbing roses and vines trained upon the walls.

In his garden were many rare and beautiful flowers which we seldom see in America, and it was so arranged that throughout the summer there were always some flowers in bloom.

No doubt a factor in the cultivation of gardens is the fact that during the summer it does not get dark in England until after 10 o'clock at night and is light again before 4 a. m. Those who go to bed before 10 o'clock have to pull down the shades in order to keep out the daylight.

The fact that it does not get dark until after 10 p. m. accounts, in part, for the fact that many of the working people in England play golf. They have plenty of time after leaving work to play 18 holes, and the English as a nation believe in sport.

In America it would seem strange to see cotton mill operatives playing golf or tennis, but in England a very large per cent of them take part in one sport or the other.

Crossing the road from Mr. Rothery's garden, we entered his house, which is located on the side of a hill and is also surrounded by beautiful flowers and shrubs. Below the house is a beautiful tennis court covered with grass. All of the English use grass courts.

We were received by Mrs. Rothery, who served tea, and we spent a very pleasant and enjoyable half hour.

Mrs. Rothery rendered very active service during the war. It was her duty to carry the news of casualties to the families of those who were killed or wounded.

Mr. Rothery, although above fifty, when the war came, immediately entered and saw active service. Three sons also entered.

Leon Rothery carries a shell wound in his face and another son, an aviator, was shot down within the German lines and was finally located in a German prison.

(Continued on Page 26)

Letters From Prize Winners

We are publishing herewith, photographs and letters from the winners of the second and third prizes in the contest which we recently conducted for the best article on "The Fine Points of Carding." First prize in the contest was won by P. K. Dry, of Landis, N. C ; second prize was won by I .K. Edwards, of the Anchor Duck Mills, Rome, Ga., and third prize by F. E. Latham, overseer of carding at the Victoria Mills, Rock Hill, S. C.

Mr. Edwards is overseer of carding, spinning and twisting at the Anchor Duck Mills and is well known as one of the most efficient overseers in the South. We are unable at this time to furnish details of Mr. Edwards' prior service.

Winner of Second Prize
I. K. EDWARDS

Winner of Third Prize
J. H. LATHAM

Mr. Latham, who is overseer of carding at the Victoria Mills, was first employed at the old Fairfield Mills, at Winnsboro, S. C., where he worked through various departments in the mill. He has at various times served as second hand, overseer, bookkeeper, assistant superintendent and paymaster. He has also been a merchant, a farmer and a railroad man. "My people tried to make a minister of me," Mr. Latham states, but he was caught in the whir of the spindles.

In acknowledging receipt of first prize, P. K. Dry writes as follows:

"I wish to thank the judges for their decision in awarding first prize in the carding contest recently run in the Bulletin. I also want to thank you for running these contests from time to time. I read every article contributed in this contest and have learned something from most every one of them, and I hope that I have mentioned a point or two in Article No. 45 that will prove beneficial to someone.

"Yours very truly,
"P. K. DRY."

Mr. Edwards' Letter.

In acknowledging receipt of his prize money, Mr. Edwards wrote:

"I have received your check for fifteen dollars as second prize in your recent contest on the subject, 'The Fine Points of Carding,' and beg that you accept my sincere thangs for same.

"I feel very fortunate indeed to have won out in this instance against so many splendidly written articles on this great subject.

"I heartily congratulate Mr. Dry as winner of first prize, also Mr. Latham in third.

"My many thanks to the judges and a hope that all those splendid fellows who so freely and manfully presented us with such a vast store of information, may be richly rewarded in the years to come, with their burdens made easier by the development of these 'points' to higher standards.

"I think the contest has been a rich blessing to us all.

"Sincerely yours,
"I. K. EDWARDS."

Mr. Latham's Letter.

Mr. Latham writes us as follows:

"Accept thanks for check for third prize money. Let me thank the judges for their careful consideration of all entries, and I wish also to congratulate the first and second prize winners. I think all will unite with me in saying that you are doing a great service in the textile field by publishing such a splendid journal as the Bulletin and giving certain space to advance the fine points of cotton manufacture.

"When I first laid down the plow handles to take up mill work we had no such fine helpers as the present day Bulletin, and men were afraid to help a 'countryman,' as he might soon know as much as the boss. But now things are different, with co-operation between men, the old ideas are banished forever.

"Thanking you again for making these discussions possible, I am, sir,

"Very truly,
"F. E. LATHAM."

A. H. Spry has accepted the position of overseer of weaving at the Vance Mills, Salisbury, N. C.

Uniform "Tare Law" Would Make It Easy To Standardize Bagging

ANTWERP, Belgium.—"If uniform 'tare laws' in the different Southern States could be adopted, it would be easy to standardize the bagging," declares C. J. Becker, cotton controller, in discussing the recent suggestion in America that cotton be covered with a cotton cloth instead of burlap for baling, and that it be sold on a net weight basis. Mr. Becker, who represents shippers exclusively in this city, Ghent and Rotterdam, says the rules of the different European cotton exchanges are an obstruction to such a change. "If cotton shippers agree to sell 'net weight,' the necessary rules will have to be made on this side," he says.

Mr. Becker, however, does not believe that cotton bagging would prove efficient. He doubts its durability during the rough handling in shipping and contends that it cannot assimilate the dampness necessary to cotton as well as can the jute bagging.

Regarding the application of patches, he makes a unique suggestion, urging that each shipper use a characteristic patch, with, for instance, an individual trademark, color or design, so that the bales can be more easily identified in the shipping centers and ports.

Continuing, he states:

"I am only afraid that light cotton bagging—(made for instance out of cotton)—cannot be made strong enough to resist the various handling from compress to the delivery in Europe and losses in weight would be unavoidable in that case. One has only to watch in what manner hooks are being used by the wharf laborers in loading and unloading vessels to see how much the bagging has to withstand.

"Also, when cotton before shipping is stored on your side or when cotton is sent in consignments to Europe and stored in appropriate (damp) warehouses, the old jute bagging takes up the humidity and gradually the cotton absorbs it, cotton being a hygroscopic stuff par excellence'! Traces of water are not visible on the jute bagging when dried up, whereas on bagging made out of cotton or other light stuff everybody can see at once from the outside the traces of wet and concludes therefrom that there is damage or some irregularity. In this respect I may mention that the storing of cotton in damp warehouses cannot be regarded as an irregularity, but as a necessity to prevent the fiber from losing its suppleness and its resistance.

"During the harvesting the weather is often very hot, later on cotton remains frequently exposed to the more or less tropical climate of the South and when shipped to Europe it loses still more of its natural moisture in the shiprooms. All cotton sent on consignment and handled by me for shippers' account I deliver ex-warehouse here with four and five pounds gain per bale against landing weight.

"This means that in a proper warehouse, cotton takes up the moisture it had lost before and in this respect the old jute bagging was very useful, it took up the wet and gradually the damp infiltrated into the interior of the bale leaving no visible traces.

"I would propose the following as standard tare:

Two full covers of jute bagging (6 yards of 2 lb. bagging), 12 lbs. Nine 1 lb. ties, per bale, 9 lbs. Total, 21 lbs.

"To close the sample holes light bagging made out of cotton will do and the weight of such light patches is so insignificant that it could be disregarded, as after all it is cotton!

"If each shipper would then give to his patches of such light cotton bagging a certain characteristic, say a brand, color or a colored design (such as stripes of all kinds, etc.) it would be very useful to avoid confusion in the shipping and landing ports.

"If the tare is standardized, there will be no more reason to patch the bales to a larger extent than necessary to close the sample holes and that with a light cotton bagging the small weight of which does not form part of the tare, but as regards weight counts as cotton.

"Already the additional patching causes a great deal of trouble and expense to the shipper and does not mean any longer a profit as before. I speak from experience when I say that until a few years ago actual taring was very seldom demanded on CIF shipments to Antwerp, Ghent and Rotterdam, and if it was demanded I always used my personal effort to avoid that the bales in question should be stripped of their bagging. I always watch carefully the party to whom I have to deliver my cotton. I am very strict in protecting the rights of my shippers, but do the controlling in an intelligent and fair manner to avoid unnecessary antagonism. In this way I can often avoid actual taring and similar claims by making a friendly settlement, thus safeguarding my shipper friends from unnecessary losses and saving at the same time the heavy cost of actual taring and the supplementary fees for controlling.

"I fear that to the distinct detriment of the trade the controlling business in Europe is often exploited too much for purely financial advantages.

"For propaganda purposes some 'World Over' Controllers in order to assume an air of importance and to be able to charge supplementary fees for all sorts of ascertainments, have introduced sharp methods against the receivers, which methods these latter are reciprocating by claiming for overtare, damp, wet in canvas, etc., etc., in nearly every instance.

"While formerly the discussion regarding bagging related more es-

(Continued on Page 30)

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JUNIUS M. SMITH — *Business Manager*

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The Cotton Situation

AFTER everybody had amused themselves by calling the Government a liar and condemning the report of an indicated crop of 13,394,000 bales, the experts began to fall in line and are now making estimates of 13,200,000 bales or less and no doubt will soon be going much lower.

When cotton was 17½ cents we do not believe that there were any bullish predictions except those of the Southern Textile Bulletin and the Wall Street Journal, but now we are being joined by a large array of experts.

After making a trip about July 12th we became convinced that boll weevil infestation was the largest ever known at that time of year.

We did not believe that the habits of either boll weevils or cotton speculators had changed.

Boll weevils had always produced record size families and cotton speculators had always played the game of getting the mills and the public upon the wrong side of the market and profiting thereby.

It made no difference to us whether the cotton market went up or down, but we were so sure of our position that we wrote three editorials urging the mills to take note of the situation.

We are now in the midst of heavy boll weevil infestation and the situation is even more serious than we anticipated.

Not only are the new squares being lost but full grown bolls are being attacked. We have on our desk a number of full grown bolls which have been punctured and in which we find grubs.

The Wall Street Journal says that the crop can easily prove to be less than 11,000,000 bales, and while we are not convinced that the yield will be that low, we believe that it is going to be much smaller than is generally anticipated.

We are also approaching the equinoctial season and if a tropical storm should come, on top of the present critical situation there would be a very sharp advance.

We would dislike to see cotton any higher than it is at present but the situation is both dangerous and critical.

Sacco and Vanzetti

SEVEN years ago two cowardly men hid behind a lumber pile in a Massachusetts village and shot down in cold blood two innocent men in order to steal from them a $15,000 pay roll, which they carried.

A few days later two Italians named Sacco and Vanzetti were captured and placed on trial for the dastardly crime.

They submitted alibis which were proved to be false and they were identified by several reliable witnesses.

They were tried before a Massachusetts jury and the twelve men, after listening to the evidence and considering the defense, pronounced them guilty of murder in the first degree.

They were convicted of murder and should have been executed at that time, but because they were prominent anarchists or "Reds," a great stir was made about their conviction.

An appeal was made to a higher court but no reason for changing the verdict could be found.

An appeal was finally made to Governor Fuller, of Massachusetts, and he called upon three very prominent and fair minded men to sit with him and study the records of the case. Their unanimous verdict was that the trial had been fair.

A final appeal was made to the Supreme Court of Massachusetts which, after considering the case, could find no reason to doubt the guilt of Sacco and Vanzetti or any evidence of an unfair trial.

The execution of two cowardly murderers was delayed for seven years by subterfuge and grandstand work.

One Chicago paper says that now that Sacco and Vanzetti have paid the penalty for their crime, a large number of men will have to find new means of making a living.

The inference is that an army of parasites have been collecting money ostensibly for the aid of Sacco and Vanzetti and have been living on same.

There is no room in the United States for Reds and the time is come to send another shipload of them to Russia.

The Hart Scholarship Fund

THE action of the Hart Products Corporation, of New York, in establishing a $500 yearly scholarship fund to aid young men and women of the Southern textile industry in continuing their education, is highly commendable in every respect and the company deserves the appreciation and thanks of the entire industry.

The $500 fund is to be handled through a committee of the Southern Textile Association, which will designate the boys and girls to whom the funds are to be made available.

The purpose of this scholarship as stated by the Hart Products Corporation is as follows:

"The object of the scholarship is to encourage the youth of the textile industry to strive for higher technical and cultural attainments and thus by precept and example serve the advancement of the industry and its personnel."

This scholarship is open to any boy or girl conected with the textile industry, or whose parents are connected with the industry. The scholarship will be awarded by a committee of the Southern Textile Association, who will consider all applications impartially with a view of selecting those who, in their judgment, most deserve assistance and encouragement.

It is distinctly understood that the fund will be used only to assist those who are not financially able to continue their education and who are considered worthy of assistance.

The Southern Textile Association and the Hart Products Corporation are anxious that the opportunity offered through the scholarship be called to the attention of as many young people as possible. Mill officials, superintendents and overseers are urged to see that boys and girls in their mills are informed of the scholarship and that those desiring to be considered for scholarship awards make application at once.

All applications should be sent to J. M. Gregg, secretary of the Southern Textile Association, 519 Johnston Building, Charlotte.

The Hart Products Company is not only to be highly commended for its desire to assist in education of the younger generation in the mills and its liberality in providing funds for the purpose, but for its wisdom in selecting a plan that will prove a very practical expression of its desire to render service to the Southern mills.

In expressing their appreciation of the step taken by the Hart Products Corporation, officers of the Southern Textile Association state that they hope that other firms and individuals may become interested in aiding education among the mills and that they will be glad to receive any other contributions that may be made to the cause.

An Extremely Valuable Book

THE Book of Proceedings of the Southern Textile Association, which was recently issued, is not only a credit to the association but is a very valuable contribution to textile literature. It contains a great deal of very valuable and practical information of a character that can be easily referred to by anyone seeking technical information.

The book gives a complete report of the annual meeting of the association, and also contains full reports of the several sectional meetings held within the past six months. The discussions at these meetings, which present the best ideas of the leading superintendents and overseers, form an invaluable source of information on carding, spinning, weaving and power plant operation. Much of the information is of a kind that could not be obtained except through discussions of the type that feature these technical meetings. Combined in one voltime, it makes a handbook that should be available to every mill in the South.

The book this year is handsomely bound in cloth. It contains 345 pages and is well arranged throughout. In addition to the reports of the meetings and the technical information, it presents a list of the membership in the association, and gives other facts regarding the association's activities.

Secretary Gregg, who assembled and arranged the material for the publication, deserves much credit for the excellence of his work. The book is not only a record of the association work, but is very visible proof of the value of the service it is rendering the Southern mills.

Will Meet in Birmingham

THE Southern Textile Association has acted very wisely in placing their Fall meeting in Birmingham, Ala.

While as large an attendance as usual can not be expected at Birmingham, it is very well to hold a meeting there in order to get in touch with the superintendents and overseers of that section.

Not only will they be benefited by the meeting but the Southern Textile Association will obtain the ideas and learn the experiences of many men who have not previously contributed to discussions.

Personal News

O. J. Allen has accepted the position of overseer of weaving at the Walton Mills, Monroe, Ga.

C. W. Ayers has resigned as master mechanic at the Walton Mills, Monroe, Ga.

L. Willett has become superintendent of the Vance Mills, Salisbury, N. C.

O. L. Yarboro has resigned as overseer of night spinning at the Chadwick-Hoskins Mill No. 5, Pineville, N. C.

J. H. Moss, of Union, S. C., is now night overseer of spinning at the Chadwick-Hoskins Mill No. 5, Pineville, N. C.

second hand in weaving at the Palmetto Mills, Columbia, S. C., to become night overseer of weaving at the Lancaster Mills, Lancaster, S. C.

H. F. Alley has been promoted from section hand to second hand in weaving at the Palmetto Mills, Columbia, S. C.

J. M. Williams has accepted the position of superintendent and manager of the Tifton Cotton Mills, Tifton, Ga.

F. M. Morris, of Union, S. C., has become master mechanic and electrician at Steel's Mills, Rockingham, N. C.

J. B. Moore, Jr., has resigned his position with the United Mills Company, Mortimer, N. C., and is now with the Martel Mills Corporation.

S. R. Kennette has resigned as overseer at the High Shoals plant of the Manville-Jenckes Company, High Shoals, N. C., and will devote his time to farming.

J. F. Chalmers has resigned as overseer of weaving at the No. 1 plant of the Glenn-Lowry plant of the Aragon-Baldwin Mills, Whit-S. C., to become overseer of weaving and cloth room at the Fort Mill Manufacturing Company No. 1, Fort Mill, S. C.

J. M. James has resigned as overseer of weaving at the No. 1 plant of the Fort Mill Manufacturing Company, Fort Mill, S. C., and accepted a similar position at the No. 1 mill of the Glenn-Lowery plant of the Aragon-Baldwin Mills, Whit-

C. H. Kennington has resigned as mire, S. C.

H. A .Newton, formerly with the Pacific Mills, Columbia, S. C., but more recently general superintendent of the Pacific Mills, Coheco plant, Dover, N. H., will hereafter be general superintendent of the Pacific Mills at Lawrence, Mass.

Floyd Jefferson has resigned as vice-president of the Hunter Manufacturing and Commission Company, New York, and will join Oliver Iselin in the cotton goods commission house of William Iselin & Co., New York.

Charles A. Cannon, president of the Cannon Manufacturing Company, Kannapolis, N. C., ad John M. Morehead, of Charlotte, manager of the Leaksville Woolen Mills No. 2, Homestead, N. C., and John A. Law, president of the Saxon Mills, Spartanburg, S. C., have been named as directors of the Charlotte branch of the Federal Reserve Bank.

R. E. Henry, president of the Dunean Mills, Greenville, S. C., will hereafter also be president of the Watts Mills, Laurens, S. C. He will continue to make his headquarters at the Dunean Mills and to reside in Greenville. Mr. Henry's election to the presidency of the Watts Mills was recently forecast in these columns.

Sirrine to Close Chattanooga Office.

The Chattanooga office of J. E. Sirrine & Co., engineers, will be closed September first, according to announcement from the company. The office, which has been in charge of Fred L. Bryant, is to be discontinued because the increasing responsibility of his personal and business affairs make it necessary for him to recide in South Carolina. Mr. Bryant will again be affiliated with the Greenville office.

W. J. Vereen Doing Well.

Atlanta, Ga.—W. J. Vereen, president of the Moultrie Cotton Mills, and chairman of the Narrow Sheeting Group of the Cotton Textile Institute, is recovering from an operation at Davis Fischer Sanatorium here. He will be confined to his bed for 10 days or two weeks. He became ill about two weeks ago, being confined to his bed at his home in Moultrie last week. He arrived at the Davis Fischer Sanatorium Saturday night.

North Carolina Spindles Continue to Show the Way.

Raleigh, Aug. 22. — Spindles of North Carolina's cotton mills continue to show the way to the textile world during the month of July, the Department of Commerce reported today.

The report shows North Carolina had 1,844,533,101 active spindle hours during the month, or slightly more than 100,000,000 active spindle hours more than the State's nearest competitor, South Carolina. Massachusetts ranked third.

South Carolina led the nation in the work done during July by the average spindles in place. North Carolina was second and Texas third.

Hillsboro, N. C.—Installation of 150 looms in the Eno Cotton Mills here has brought the total number in operation at the plant at the present time to 1,000, according to an official. Textile business in Hillsboro has been very good during the past six months, it is learned, with the operators working full time in practically all departments.

MILL NEWS ITEMS OF INTEREST

Marietta, S. C.—Fiske-Carter Construction Co., Masonic Temple Bldg., Greenville, has let sub-contracts for mill of S. Slater & Sons, Inc., to J. A. Piper Roofing Co., 116 St., Greenville: roofing and sheet metal work; Edens & Moon, 204 Pendleton St., Greenville, plumbing.

Concord, N. C. — Willis Hosiery Mills, Concord, has been incorporated to manufacture and deal in hosiery, etc. Authorized capital $100,000, subscribed $10,000, by E. K. Willis, Concord; E. W. Freeze and R. R. Ragan, High Point. It will take over the Hoover Hosiery Company.

Mebane, N. C.—The Wyrick Hosiery Mills, recently incorporated here, as noted, have elected the following officers: W. W. Corbitt, president; J. C. Halls, vice-president; G. G. Wyrick, secretary and general manager. The company will either lease or build a building.

Asheboro, N. C.—The Secretary of State of North Carolina issued a charter of incorporation to the Randolph Silk Hosiery Mills, to deal in knitted goods. Authorized capital $400,000; paid in stock, $500. The incorporators are: D. B. McCrary, W. J. Armfield, Jr., Hugh Parks, K. Alexander and C. W. McCrary, all of Asheboro, N. C.

Greenville, S. C.—Bids have been received for the erection of 100 mill houses at Marietta for the Slater Mills in the office of J. E. Sirrine & Co., engineers for the job. The contract will be let within the near future. The houses will represent an approximate expenditure of $150,000. The contract for the houses will call for their completion at the same time as the mill plant, which is now under construction.

Los Angeles, Cal.—The machinery of the Imperial Cotton Mills, Inc., an organization formerly engaged in the manufacturing of ducks, drills, and denims, has been sold to the American Textile Company, of Atco, Ga., according to representatives of the concern. The machinery originally cost $1,000,000. Its selling price was not revealed.

This organization was incorporated in 1922 by F. M. Douglas, it is stated. It ran for two years, was unsuccessful and finally closed down for two years. Douglas was succeeded in the middle of 1924 by M. H. Merrill, textile engineer. The plant, unable to secure financial backing, was bought in at public auction by bond holders in 1926. The company failed to redeem the bonds, in the amount of $500,000, it is stated, and the bond holders foreclosed.

The machinery is being shipped East this month, and the concern's property, consisting of four and one-half acres, and large buildings with about 250,000 square feet, is for sale. The property is valued at $500,000.

Bristol, Va.—The Artus Knitting Mills have been incorporated by Wm. Ray Baldwin, president of the Elk Mills, of Maryland, and J. Wesley Querns, of this place.

Morganton, N. C.—The Morganton Full Fashioned Hosiery Mills have completed installation of three specially built machines for producing silk hosiery, these machines being the first of 15 machines that have been ordered. The company expects to begin operations next month.

Charlotte, N. C.—A wind and electrical storm which swept over this section late Thursday afternoon caused damage amounting to thousands of dollars and placed the lives of approximately a dozen persons in jeopardy, when two houses in widely separated sections were struck, a survey of the storm area in city and county, conducted Friday, disclosed.

The storm centered over the Paw Creek section, where wind, the velocity of which was estimated at 45 to 55 miles an hour, whisked away the roof of a transformer building, 40 by 40 feet in size, at Kendall Mills, at Thrift, and blew down practically every outbuilding around the 100 homes in the mill village.

Jewell, Ga.—The Jewell Cotton Mills, which were recently burned, as noted, are making plans for rebuilding the plant. In the meanwhile, all of the contracts of the company have been assumed by the Imperial Mills, of Eatonton. The latter is also giving employment to some of the employees of the Jewell plant.

Toccoa, Ga. — Announcement was made here of the purchase of the Capps Manufacturing Company by E. W. Gregory, of Abbeville, S. C.

The Capps Manufacturing Company is a cotton mill of 6,240 spinhas not been in operation for a considerable period of time. Mr. Gregory will assume the presidency of the plant and will maintain his headquarters at Abbeville.

Mr. Gregory has until a few weeks ago been manager of the Abbeville telephone system, which he sold to a chain of telephones operating in Georgia, Florida and South Carolina.

Abbeville is pleased that Mr. Gregory and his family will continue to live in this city. The purchase of the mill was made from T. A. Capps of Toccoa.

Kings Mountain, N. C. — Ground has been broken here an extension to the Sadie Cotton Mills, which will measure 104x128 feet and be two stories in height. It is expected that the capacity of the plant, which manufactures combed yarn, will be doubled when the addition is put into operation.

At present, the equipment of the Sadie Cotton Mills included about 8,000 spindles. L. A. Kiser is president, and D. C. Mauney is secretary-treasurer.

Stanley, N. C.—It was learned that the textile manufacturing plants at Stanley and the other textile manufacturing industries under the management of R. F. Craig are running full time and there is no curtailment in sight for these mills. The mills now are operating on orders that will last for the next two months and other orders are being taken which will keep the mills running. The old mill of Lola, known as No. 1, has closed down some for the past two weeks and given the employees a few days' vacation, while the dye house in connection with the mills is running full time.

Greenville, S. C.—Showing net profits after all charges of $503,857, the annual report of the Victor-Monaghan Company of Greenville, is the most favorable of that company in the last three years. For the year ending June 30, 1926, the company reported profits of $437,176. The report for the year ended June 30, 1925, showed profits of $414,696.

The charges set up this year included liberal depreciation of $198,400.

At the annual meeting last week the usual dividends of 7 per cent on the preferred and 8 per cent on the common were declared, payable quarterly. The company's common stock is now quoted on the local market at 106 with 108 being asked.

Greenville, S. C.—A large dyeing and finishing plant on the Greenville & Northern Railway about one mile above Travelers Rest is to be built at once by an Eastern manufacturing firm, according to announcement made by the Greenville Chamber of Commerce.

The name of the concern establishing in this section was not made public, nor was the capital to be invested and dimensions of the plant. Options on 400 acres of land have been closed and titles to the property now being examined. Engineering arrangements are in the hands of J. E. Sirrine & Co., of this city.

A large number will be given employment by the plant, according to information secured, and construction will be modern in every respect. Building will be launched as soon as preliminaries have been completed and plans drawn.

With the large textile plant of S.

Slater & Sons, Eastern textile interests, alredya under construction near Mariett,a on the G. & N. Railway, residents of the upper section of this county are much enthused over prospects for rapid development. Business generally in this county is this county is being stimulated with the entrance of new industries into this section. Probability was expressed when the Slater mill project was assured that a bleachery would likely be added for that plant and material additions to the mill made within a comparatively short time.

Durham, N. C.—Offering to sell the entire holdings of the Erwin Cotton Mills in Durham on a basis of $30 per spindle, W. A. Erwin, cotton manufacturer, president of the company, appeared before a citizens committee appointed to hear complaints on the new property valuation in an effort to secure a reduction. The appraisers had placed $34 per spindle as a fair basis of taxation.

The mill's officials asked for a valuation of the mill property on the basis of the number of spindles, 76,768 in number, and that the spindle rate be $30. They had considered asking for valuation or $25 on the spindle, but had decided upon the higher amount as a fair basis, officials said. This would mean a reduction in the valuation of $300,000, the assessors having fixed the amount at $3,561,092.

S. T. A. To Meet in Birmingham

The semi-annual meeting of the Southern Textile Association will be held in Birmingham, Ala., on October 28 and 29. In announcing the date of the meeting, Secretary J. M. Gregg states that headquarters for the meeting have not been decided upon, but will be announced within a short time.

Special efforts will be made to have a large number of superintendents and overseers from the mills in Alabama and Mississippi attend the meeting of the association in Birmingham and officers of the association hope to be able to organize an Alabama-Mississippi section of the Southern Textile Association at this time. It is felt that the association can be strengthened through an organization of the men in Alabama and Mississippi and that the industry in these States can be materially benefited through the service that the Southern Textile Association is rendering in other States.

The program for the Birmingham meeting is now being prepared and will be announced by Carl R. Harris, vice-president, within the near future.

Mills Seek Lower Taxes

Durham, N. C.—The Erwin Cotton Mills of this city is seeking a reduction in the valuation of its property for county tax purposes of around $300,000. The county assessors have appraised the property at $3,561,092. W. A. Erwin, president of the mills, appeared before a special committee appointed by the board of county commissioners to hear his complaint against the valuation, and stated that he thought that $30 a spindle would be a fair valuation for the property.

While the tax appraisers had not used this method of arriving at the value of the property, they showed that their valuation would amount to $34 a spindle. The mill has 76,768 spindles. Mr. Erwin stated that he thought that $25 per spindle would be a high enough valuation, but to be eminently fair he was willing to concede $30. He stated at the same time, however, that he would sell all of his holdings at that price and would urge the directors to sell the entire mill at that figure.

K. P. Lewis, secretary and treasurer of the mill, said the book value per spindle was $21.28. The book value of the buildings and machinery is $1,335,000, while the assessed value is $2,040,000, it was pointed out.

Figures submitted to the committee by Mr. Lewis as to values of the divisions of the property included mill buildings at $377,854; mill machinery, $957,895; tenement houses, $152,441, and real estate, including the mill sites, $157,978.

The committee also heard a request from C. M. Carr for a reduction of $60,000 in the valuations placed upon the Durham Hosiery Mill property. Final decision as to both requests will be announced later.

32,311,802 Cotton Spindles Active in July

Washington, D. C.—The Department of Commerce announces that, according to preliminary census figures, 36,728,086 cotton spinning spindles were in place in the United States on July 31, 1927, of which 32,311,802 were operated at some time during the month, compared with 32,753,428 for June, 32,906,580 for May, 32,892,442 for April, 32,919,288 for March, 32,872,102 for January, and 31,057,484 for July, 1926.

The aggregate number of active spindle hours reported for the month was 8,042,790,747. During July the normal time of operation was 25 1-6 days (allowance being made for the observance of Independence day in some localities), compared with 26 for June, 25½ for May, 25 2-3 for April, 27 for March, and 23 2-3 for February. Based on an activity of 8.78 hours per day the average number of spindles operated during July was 36,399,306, or at 99.1 per cent capacity on a single-shift basis. This percentage compares with 109.2 for June, 109.0 for May, 105.8 for April, 109.7 for March, 106.8 for February, and 78.7 for July, 1926. The average number of active spindle hours per spindle in place for the month was 219.

Visiting Europe

(Continued from Page 18)

The war was bad for Americans but was far worse for the men and women of England, who faced a desperate situation during the height of the German power.

Leaving the Rothery home, Dennis Crowther drove us to the home of his father, where I found both Mr. and Mrs. Crowther to be real enthusiasts about flowers.

Both of them showed we their wonderful flower gardens and it was easy to see that they took pride in every flower and every shrub.

They have not had their present home for many years but have converted it into a beautiful spot. Utilizing large stones that were on the lawn, they have built several coves and covering the rocks very lightly with dirt, have planted mosses and ferns. They gave me the roots from one flower that grew very thick about three inches tall and covers a large area of the rocks. I brought the roots back to Charlotte but they had dried out so much that I do not think they will live.

Leaving the Crowther home, we drove across town to a Country Club, which is one of the most unusual in the world.

They have a good golf course with the fine turf, which is peculiar to England, but the most interesting feature is their club house, which is the castle of the former Earl of Dartmouth. They lease the property from the present heirs, who now live in another section of England.

The castle was built in the early days of England when the Earl of Dartmouth was at active war with his neighbors, and has all the features connected with the castles of such times.

There is a large inner court into which all of the servants and tenants, together with their cattle, could be brought when the enemy approached and the original door with its original and massive lock is still intact.

There is the drinking room with its big fireplace in which a pig or a side of beef could be roasted and around the top of the room connecting with the second floor were windows through which the women could watch and could beckon to their husbands when they imbibed too freely.

They were the days when the wives and flappers did not out drink the men, as is often the case now.

In the yard is an immense barn into which the tenants brought the cattle when they delivered as tribute to the master of the castle. The barn is in bad repair and will not last much longer.

I met quite a number of Englishmen and enjoyed inspecting the castle, much of which is not in use, as it is too large for a country club devoted almost entirely to golf.

Driving back to town we had dinner with Dennis Crowther and then spent about an hour walking over the city.

It was broad daylight when we went to bed about 10 o'clock.

(Continued Next Week)

Combination Gin and Spinning Machine Exhibited in Anderson

Anderson, S. C.—A genius who lived in the wilds northwest of here about fifty or sixty years ago, or even before that time, might have been able to give modern inventors a pointer or two concerning the best

methods of converting cotton into strands of thread to be woven into cloth. Although the obscure backwoodsman who invented a combination gin and spinning machine now on exhibit here, has long since been forgotten, his machine reveals something of the mechanical turn of mind which the man possessed.

W. L. Brissey, of the Brissey Lumber Company, of this city, who has a habit of picking up old and odd machines of one kind and another, recently ran across the above mentioned machine "back in the wilds" and he is now displaying it here.

Whether or not the man who invented it made anything out of it, or ever put it into practical use is not known, but nevertheless he showed his remarkable ability, and revealed his imagination by the thing which he turned out.

A combination gin and spinning machine is probably the best name for the apparatus. Evidently the inventor was attempting to overcome the long and tedious work of taking the staple before it had been separated from the seed, running it through a gin, then carding by hand and finally taking the "roll" and spinning on the old-fashioned spinning wheel. The apparatus which he fashioned, and fashioned well, accomplished the three operations in one, or so it is indicated.

The unginned cotton is placed in one compartment of the machine, where the lint is separated from the seed as in a gin. It then goes through two rolls that did the carding, and from that it goes into spinning wheels that twist the cotton into thread. There is no way of telling the age of the machine, but it evidently was built before the Civil War. Cotton lint is still scattered through the parts, showing that it had been in use. It was propelled by hand power, and this must have been a load for a strong man to turn. The machine is now in a dilapidated condition, but Mr. Brissey intends to have it rebuilt, do away with the old hand wheel and have it run by a motor.

While such a combination machine would be of little or no service in this day and time, the machine reveals the remarkable turn of mind of a backwoodsman whose work never came to public notice in the time when it might have been of great service.—Greenville Daily News.

Cannons Buy Renfrew Plant

Concord, N. C.—Purchase of the property of the Renfrew Manufacturing Company here by C. W. Byrd and J. A. Cannon was announced with completion of transfer of the property. The purchase price was not given.

The new owners announce that the plant will be dismantled. What is to be done with the mill building, warehouses, operatives' houses and real estate has not been determined, it was said. The machinery will be sold at once.

The Renfrew mill is a 7,000 spindle plant and ordinarily used about 125 operatives with an annual pay roll of $100,000. It has been owned by the Renfrew Manufacturing Company, of Adams, Mass., for several years, formerly carrying the name of the Brancord Mill.

C. A. Meis has been resident manager of the mill for the past several years. He has not announced what work he will take up. The mill has been idle for several months.

With the mill the new owners secured 10 acres of land, three houses and several warehouses. The plant is located in the heart of the city, between the high school and No. 2 school, and on a spur track of the Southern Railway.

New Type of Chain

The Morse Chain Company, Ithaca, N. Y., long noted as the manufacturer of the original rocker-joint chain and one of the largest manufacturers of silent chain drives in the world, has announced an improved chain. The improvements are principally due to changes in the design of the rocker joint.

The new design, 55 type chain, will run on all sprockets, the new link being the same length and height as the old.

The new joint, the makers say, operates on the same principle as the original Morse Rocker Joint. The seat pin, at the left, has been enlarged to give greater bearing surface and also to make it a stronger transverse member to hold the chain together.

The rocker pin, at the right, has been changed in contour, thereby giving a better surface of contact with the links.

The combined joint members give a more nearly round hole with reduced clearance, holding the links more securely on the pins. A better balanced joint, heavier than the old, produces a smoother running chain. It is a more rugged chain—the joint pins are about 8 per cent heavier and the complete chain weighs twice the pitch per inch foot. The breaking strength is increased about 50 per cent.

The improved, better balanced joint, with larger bearing surfaces and pins more securely held in the links, permits increased tension without shortening the life of the drive.

The Morse Chain Company also announces at this time that it has recently installed the most modern automatic electric furnaces to insure the more uniform heat treating of the parts entering into the chain.

Distribution Real Textile Problem

A study of problems of distribution in all branches of industry serves to emphasize the fact that efficiency in production has run far ahead of efficiency in distribution, according to Frederick K. Ruprecht, president of the Consolidated Textile Corporation, who has just gone abroad to study conditions, and will spend some time in the British market.

"Borsodi's study of distribution shows that during the fifty years from 1870 to 1920 the percentage of the population engaged in production as compared with percentage engaged in distribution decreased from 88 to 70 per cent," Mr. Ruprecht points out.

"In the same time the percentage of the population engaged in distribution gained from 12 per cent to 30 per cent. Since it is obvious that all human labor must be paid for somewhere along the line, these figures mean that today we are paying proportionately much more for distribution and much less for production than we were fifty years ago.

A Complicated Problem.

"The problem to be attacked is much more complicated than the mere question of cutting out intermediate factors between production and consumption. The manufacturer, jobber and the retailer are all constantly called upon for services that they did not formerly perform, and this costs money. Nevertheless, we have all got to spend a lot more time and brains than in the past on overcoming the spread between the producer and the consumer. The problem must be attacked from different angles in different industries.

"From my own investigations I find one manufacturer of shoes claiming that owned branch stores provide the most economic distribution, while another equally large concern tells we that established retailers drawing on branch warehouses can do the job much better. Both of them are right so far as their particular business is concerned. I only mention this to show that it is not worth while to search for a single formula that will solve the distribution problem for all industries and all kinds of goods.

"One phase of this problem that has impressed itself very emphatically upon me is that unless we improve distribution we are going to be compelled to deal with a serious problem of overproduction, with all the evils that such a situation inevitably brings. In saying this I am not thinking so much about the cotton textile industry as some others.

Mills Assert Themselves.

"One development in our own industry that is of considerable importance is a change from the old condition under which selling houses fixed prices for the mills. Now manufacturers are asserting — and rightly—a voice in the making of prices. This will cure many evils that grew out of a situation in which commissions rather than profits for the manufacturer were the controlling factor. I am glad to see this. It will put the whole industry on a sounder basis, and, while it, of course, makes life harder for the selling agency, it will be productive of good results in the end.

"As a generalization it looks to me as though the concerns that are to succeed in the future will be those who best solve their distribution problems. They have too long concentrated on raising the efficiency and output of the production end of their business. Now the same degree of study and effort must be put into the distribution end. On that, I am confident, will largely depend the survival of the fittest."

Many Novel Weaves in New Fall Rayons

Rayons presented in the fall line of the T. Holt Haywood Dept. of Frederick Vietor & Achelis, Inc., number many novelty weaves, including rayon-and-cotton mixtures. So far calls for gingham types are reported to be far in excess of those for last year.

Three sizes of shepherd checks, plain goods and shirtings are said to be selling well. Gingham effects introducing checks of rayon continue to find the larger demand, it is said.

Among the designs added to the "Parisette" line of heavy suitings are checks and woven designs introducing several colors, giving the effect of small Scotch plaids. Contrasting threads are usually of rayon.

An interesting drapery fabric is a small woven plaid using four colors. Each square is of a solid color, these arranged in a rather irregular checker-board pattern which produces a novel effect and offered in an extensive color range.

Another fabric which is being brought out is an all-rayon in a pliable weave, developed in horizontal stripes in Roman effects. This also is offered in an extensive range of color combinations. — Daily News Record.

The Land of Wide Success

THAT famous captain of the cotton textile industry, F. Gordon Cobb, is quoted by the Atlanta correspondent of the New York Journal of Commerce in this wise: "It is hard for a young man in the South to escape success. Opportunity on this side of the line stands with such long arms, so widely stretched that if a fellow runs at all he'll run into them. . . . New England mills are establishing themselves here, where climate and labor conditions are favorable and where they will be in the heart of the cotton belt—a decided advantage. . . The South faces one of the greatest periods of prosperity it has ever known."

The sage of Lancashire—sage in cheerful wisdom, not in years—though referring directly to his own South Carolina, well described Dixie in general and Georgia in particular. That Georgia has been chosen so frequently for recent major investments by eastern mills, is hardly a matter of chance. Moderate taxes and liberal laws, as well as abundance of water power and raw materials and the best of transpor-

tation facilities, were telling factors. But in the prosperous circle of the Southern tSates there is opportunity enough for all, without rivalry save that of the most generous sort. Georgia rejoices in the good fortune of her neighbors, as they do in hers; and the success of each reacts for the advantage of all. —Atlanta Journal.

Defibrating Cotton

A recent inspection of the latest type of Segundo defibrating machine revealed many improvements in construction, output, and simplicity on the original design. The function of this machine, as its name implies, is to remove as much adherent short fibre or lint as possible from the seed (compatible with ultimate reffuirements) after the operation of the ordinary saw linter. As a result of introducing the Segundo machine at this stage a further 3 to 3.5 per cent of seed lint would be taken off after an elimination of approximately 3 to 3.5 per cent of lint at the first saw linting machine. In addition to the advantage of this greater output of lint, the seed itself is far more responsive to the production of high-grade oil and cake, owing to the seed lint having been more or less completely removed by the machine without material injury to the seed, such as crushing and breaking. This, incidentally, accounts for the premium of seed defibrated in this manner over ordinary seed. It is claimed also that besides the premium and the gain in seed lint, which is suitable for the manufacture of artificial silk, high-grade paper, and explosives, there accrues a saving in transport if the machine is erected at the ginnery. While this is probably quite correct, mixing of the lint with good cotton, attended with ill effects from the spinners' point of view, would not be an impossibility under such conditions.

The machines are arranged in batteries of four or eight, each unit, which can be cut out ad lib., being composed of a vertical cylinder, 17-in. in diameter, encasing a central vertical rotor or beater, which rotates at approximately 600 r. p. m., and is equipped with specially formed bars. The rotor bars, in conjunction with a series of stationary bars fixed on the interior of the cylinder and set close to the rotor bars, serve as the defibrating agents. The feeding of the machine is effected automatically by means of an overhead conveyor, which deposits the seed into a specially formed tube placed within the cylinder and immediately over the top of the rotor. The seeds issuing from this tube immediately come in contact with the specially formed head of the rotor, which distributes them in spiral formation and causes their impingement on the stationary bars within the cylinder. At this stage defibration begins, due to the interaction of the seeds with the two defibrating surfaces, and continues until the seed escapes at the bottom of the cylinder through an annular aperture, the size of which can be easily adusted according to the duration of treatment desired and the

Index To Advertisers

Where a — appears opposite a name it indicates that the advertisement does not appear in this issue.

type of seed under treatment. While the seeds pursue a downward path, the lint itself is carried upwards spirally on the interior of the cylinder by means of an air current, ultimately to be led away to a suitably arranged receiver, collected, and made up.

From the above description it will be apparent that air conditions play an important part in the satisfactory working of this machine, which in many of its principles resembles the Crighton opener, so popular with cotton spinners. The rotor revolves in two ball bearings (footstep and bolster), situated between which is the driving pulley. It would appear that if some method of balanced driving (such as, for example, is employed in the later Crighton openers) could be applied to the rotor the wear on the bearings mentioned might be substantially reduced and any vibratory tendencies of the rotor itself minimized. The defibrating bars of the rotor can be easily replaced or renewed, and are comparatively inexpensive so far as their present construction is concerned, while attention to the design of these elements merits importance in connection with the possibility of seed damage.

It may be stated that the machine certainly functions very efficiently, giving a good yield of lint and clean seed, while the feeding and unloading of the machine are effected entirely by automatic means, thus dispensing as far as possible with labor. Furthermore, the adustment of the machine, according to the type of seed and lint required, is easily carried out from one source. It should be mentioned that on starting up the machine the charging of the cylinder with seed occupies about three-quarters of an hour; in actual practice, however, the work is continuous. Appended is a result of tests carried out at the works of Messrs. Dobson and Barlow, Ltd., Bolton, on Wes African (Zaria) seed:—

Segundo Machine Tests.

Standard machine (17-in. parallel type) fitted for seed, with bar beaters, etc.

Seed used, West African (Zaria).

Duration of test, 121 minutes.

Quantity of original seed used, 577.5 lb.; 286.3 lb. per hour.

Quantity of defibrated seed, 558 lb.; 276 lb. per hour=96.3 per cent.

Seed lint (actual), 18.25:; 9.05 lb. per hour=3.1 per cent.

Power, 3.5 x 3=10.50 units; 5.2 units per hour.

Power per ton of lint, 1,28 units.

Rotor speed, 600-610 r. p. m.

Seed shaft conveyor speed, 5.5 r. p. m.

Lint white and clear. Breakage nil.

Defibration good. Air conditions good.

Uniform "Tare Laws" Would Make It Easy To Standardize Bagging

(Continued from Page 20)

pecially to the fabric of bagging, whether cotton, jute or whatever it may be, the recent discussion I understood originated from the cotton shippers themselves who have the wish and the right to have all sorts of claims and costs of actual taring, etc., avoided in future. If the tare can be standardized, all these troubles will disappear." — Daily News Record.

Hart Products Corp. Establishes Scholarship

In making its decision to establish a yearly scholarship fund of $500 to be used in assisting young men and women in the Southern textile industry in furthering their education, the Hart Products Corp. asked the Southern Textile Association that the fund be handled through a committee from the association and that all selections for the awards be made by this committee after a careful examination from all of the applicants.

The letter from Ralph Hart, president of the Hart Products Corporation, to J. M. Gregg, secretary of the Southern Textile Association, asking the latter to take full charge of the scholarship fund, was as follows:

"Will you kindly transmit the following request to the proper governing body of the Southern Textile Association?

"The Hart Products Corporation, consulting chemists and manufacturers of chemicals for the textile industry, is desirous of establishing a yearly scholarship fund of five hundred dollars ($500.00), to be awarded to any applicant or candidate selected by the Southern Textile Association.

"The object of this scholarship is to encourage the youth of the textile industry to strive for higher technical and cultural attainments and thus, by precept and example, serve the advancement of the industry and its personnel.

"Having stated the purpose of this scholarship in a general way, we feel that all other details can best be left to the association or its committee. The association will, therefore, be at liberty to use this fund in any way that in their opinion will result in the greatest general good.

"We in turn will find great pride in knowing that each year in some small way, we have acted as a stepping stone for some worthy individual whose ambition it shall be to advance himself or herself, and thereby, be of greater service to this fundamental industry, or instrumental in raising the standing of its membership to a still higher plane."

Ginning Report.

Washington.—Cotton of this year's crop gained prior to August 16, totalled 457,031 running bales, counting 10,933 round bales as half bales, compared with 182,255 bales, including 1,385 round bales to that date last year and 579,291 bales, including 9,334 round bales, to August 16, 1925, the Census Bureau announced today.

Ginnings by States were:

Alabama, 11,317; Florida, 1,154; Georgia, 39,448; Louisiana, 2,247; Mississippi, 1,604; Texas, 400,737. All other States, 424.

Whittier Foresees Laws To Control Resale Price Near

Edmond A. Whittier, secretary-treasurer of the American Fair Trade Association, is author of a bulletin issued by the association, in which he declares legislation by Congress to regulate resale price is virtually certain at the next session.

Mr. Whittier expresses himself in part as follows:

"The pure food law, one of our wisest and most beneficial statutes, regarding it as a whole, was achieved only after 24 years of almost continuous work. It is evident that legislation to protect against unfair and uneconomic price cutting and manipulation is passing through a similar process. Each year sees a definite advance in the education of public opinion which must be carried out before this legislation or any other of similar importance can be successful, however necessary.

"After 14 years of unremitting effort, legislation permitting the standardization of resale prices seems to be on the verge of accomplishment. The average American business man has reached such a stage of puzzlement and exasperation in regard to his rights in the matter of contracts covering resale prices that the demand upon Congress to do something at its next session has become almost irresistible. Regarding themselves as the representatives of the people, senators and congressmen quite naturally have waited until the popular demand for this legislation has reached an insistence that must be considered.

"Those who have believed that relief from this situation might come from the courts, and that legal interpretation of present statutes would work out the problem, have met so many disappointments that they now realize that a Federal statute is the only solution.

"The members of Congress have thus become more directly interested and concerned with the public benefit of such a law, and because of the progress with was specially marked during the last season, definite action is practically assured when Congress convenes again.

"The recent announcement by the Federal Trade Commission of a broad economic survey of the problems involved in resale price control, paves the way for action.

"In its statement to the press, the commission frankly concedes the fundamental legal facts of the situation which we have insistently stressed as intolerable and as inescapably demanding legislative relief along the lines of Capper-Kelly bill. The statement says:

"'Resale price fixing presents probably the most perplexing question before the Federal Trade Commission and the trade and industrial associations today. Conflicting decisions have been handed down by the courts. Among commercial leaders there is a sharp division of opinion of opinion as to the extent to whcih prices can and should be regulated. It is expected by the Federal Trade Commission that this investigation will go a long way toward clearing up these difficulties as this will be the first really comprehensive investigation of the subject undertaken.'

"In fact, there is so much evidence of actual progress and aroused opinion, that there is every indication that the next Congress will surely proceed to a vote upon the bill."

Management and Modern Machinery

In the re-establishment of the New England textile industry the two vital points to consider are management and modern machinery, and the mills lacking in either skilled management or modern equipment are pretty certain to go into liquidation or bankruptcy and finally to the scrap pile.

All well managed mills can finance reasonable requirements for new equipment and all mills can secure competent manufacturing officials if the executive end is willing to pay the price to get the right men. It is not the highly technical man that is required, so much as the graduates from the school of hard knocks. The men of the hour in the present stage of readjustment are the practical men who have had long experience in their chosen lines and men who have adaptability to handle help, as in the final analysis, satisfied help is the difference between profit and loss.

The most of our mill corporations have buried custom and are meeting the new conditions in manufacture and merchandising in the modern way, but there is plenty of chance for improvement in mill methods, and a need for large expenditures for new equipment before we are entirely out of the woods.

Where it has been tried out, the men in the mills that have been given full control of manufacturing have all made good, and the growing tendency to get better acquainted with the men in the mills, the increasing call on these men for suggestions and advice is the most encouraging sign of future prosperity yet recorded.—Fibre & Fabric.

Data on Activity in Field of Textiles is Published

Washington, D. C.—To aid business executives in analyzing tendencies in production, prices, stocks, and exports in the textile field, the Department of Commerce has just published the textile section of the Record Book of Business Statistics. In this bulletin, which will be followed by sections relating to other industries, there are presented statistics month by month from 1909 through 1926, where available, on the various phases of the cotton, wool, silk, rayon and other textile industries. The statistical data are supplemented by descriptive text, illustrating the actual uses of this material by business concerns in planning sales and production policies, purchasing, etc., through the publication of these data currently in the department's monthly "Survey of Current Business."

Cotton and Dyeing From a Chemist's Point of View

(Continued from Page 8)

tion and the dyestuff is oxidized by exposure to air or a chemical oxidizing agent, giving an insoluble compound fixed in the fibre. This type of coloring matter includes indigo and various other vat dyestuffs.

The fastest types of dyestuffs on cotton are, in general, those which are produced in an insoluble form within the fibre, whereas the others may be removed to a large extent by prolonged washing, etc. This indicates that the chemical affinity of cotton for dyestuffs is either very small or non-existent. The chemistry connected with the production of colors on cotton is mainly connected with the preparation of the dyestuffs themselves and the preparation of the dyebaths, both complicated matters in some cases.

Although cotton dyeing does not seem to be a chemical phenomenon, as I have mentioned before, the alteration of the groups in the cellulose molecule or the addition of other groups has a marked influence upon the dyeing properties. To illustrate this, I would like to make a few remarks upon the dyeing properties of cellulose derivatives.

First, we may consider nitrated cellulose. Nitric acid reacts with cotton in a different manner from that of other mineral acids. It has a mercerizing action on cotton, which causes swelling and increased affinity for direct cotton colors, just as is the case with caustic alkali. The affinity for direct colors is almost twice that of cotton mercerized with alkali. Steeping cotton in nitric acid of 84 deg. Twaddle for a few hours causes it to acquire an affinity for acid dyestuffs such as acid violet. It is thus said to be "animalized" by this treatment. By treatment with a mixture of strong nitric and sulphuric acids, cotton cellulose is converted into cellulose nitrate, which forms the basis of one type of artificial silk. Up to a certain degree of nitration, probably owing to mercerization, cotton shows an increased affinity for direct colors when treated with the mixed acids. Beyond the state of tetranitro cellulose, this affinity decreases almost to nothing, according to the state of nitration. But highly nitrated cellulose has a marked affinity for basic colors.

By treatment with glacial acetic acid, acetic anhydride and a catalyst, cotton cellulose is converted into cellulose acetate. This ester has very different dyeing properties from those of ordinary cotton, owing to the changes in the structure of the molecule. The presence of acetyl groups causes a marked increase in the affinity for basic dyestuffs and a loss of affinity for most of the cotton colors. It has a strong affinity basic organic compounds such as para nitraniline, and these can be diazotized on the fibre and coupled with naphthols to produce insoluble azo colors. If, however, the surface of the acetyl cellulose fibre is converted into cellulose by saponifying with caustic alkali, the normal dyeing properties of cotton are regained.

Finally, I want to mention the effect on dyeing properties of immunization and amidation of cotton. Early attempts to produce immune cotton were made by treatment of cotton with acid chlorides, following a treatment with alkali, but owing to the unpleasant properties of many acid chlorides, other substances had to be found. It was found that successful results could be obtained by the use of para toluene sulpho chloride and similar compounds, such as benzine, xylene and naphthalene sulpho chlorides. Bromo derivatives were also tried with success, but the first is generally used, as it is a fairly cheap by-product obtained in the manufacture of saccharine and it is stable in water.

Para toluene sulpho chloride has very little action on ordinary cotton, but it reacts readily with cotton which has been treated with alkali. The cotton is carefully bleached so as to remove as much of the impurities as possible, and it is then treated, after drying, with an alcholic solution of caustic soda. The resulting alkali cellulose is hydroextracted and immersed in an alcoholic solution of para toluene sulpho chloride for an hour. It is then hydroextracted, soaped at 60 deg. Cen., and dried.

The product is very different in its physical and chemical properties from ordinary cotton. The process causes shrinkage and loss of lustre, and the lumen of the original fibre disappears almost entirely, leaving an almost solid cylindrical fibre. The tensile strength is less than that of cotton, and it has a harsher handle than cotton. The dyeing properties and resistance to chemical reagents are also greatly changed.

The esterification of cotton is never complete, and immunized cotton appears to consist of an outer layer of esterified cellulose and a core of unchanged cellulose, since the immunized portion can be dissolved away by suitable solvents, leaving cellulose behind. It is owing to this residue of cellulose that immunized cotton becomes stained when treated with a large percentage of a direct cotton color.

Immunized cotton is very resistant to many chemicals, such as strong alkali and acids, and will withstand ordinary cotton bleaching processes and careful mercerizing. The composition of this ester of cellulose is akin to that of cellulose acetate, and it behaves, in some ways, like that fibre towards dyestuffs. It is, however, more resistant to many reagents than acetyl cellulose. The changed dyeing properties, brought about by the introduction of a new group into the cellulose molecule, are very interesting. It has no affinity for direct cotton dyestuffs but has a marked affinity for basic colors and for a few acid colors. Like acetyl cellulose, it has an affinity for certain amines which can be diazotised on the fibre and converted into dyestuffs by coupling with naphthols. It may be dyed with practically all the colors specially made for acetyl cellulose and by using suitable dyestuffs. The material may be dyed before immunizing. These properties should make the

fibre very useful as an effect thread in multi-colored fabrics, as a wide range of colored effects may be obtained. It is possible to remove the ester group by means of potassium cyanide, and so destroy the immunity of the cotton to direct dyestuffs.

An alteration in the molecule, which has a marked effect on the dyeing properties, was discovered by Karrer and Wehrlis. They treated immunized cotton with ammonia and split off para toluene sulphonic acid, leaving cotton combined with an amino group. This material is known as amidated cotton. Ammonia has no action on cotton under ordinary circumstances, but can be made to combine by this process. Aniline and certain other amines can be used in place of ammonia, but the latter gives the best results. It has been found also that other esters such as the acetate and benzoylated cotton can be amidated by treating with ammonia under pressure. Actually, in practice, the product only contains one amina group to eight or nine molecules of cellulose. The effect of the structure is to give the amidated cotton a strong affinity for acid dyes and direct dyes. Acetylation of the group, by means of acetic anhydride, diminishes its affinity for acid dyes considerably, and it is converted to an acetylated amino cellulose, very similar in dyeing properties to acetyl cellulose. These compounds illustrate the effect on dyeing properties caused by changes of structure of cotton cellulose and, at the same time, indicate that chemical attraction does exist between cotton and dyestuffs, thus giving some support to the chemical theory of dyeing.

German Textile Activity

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fabrics of all kinds, the position of the Germn industry is quite favorable. In the Chemnitz district manfacturers of artificial silk stockings and fashionable knitted goods are employed to full capacity, and in so far as labor conditions permit overtime and double shifts are in operation.

Taken all in all the German textile industry is thus satisfactory in all sections, and the prospects for the near future appear to be quite good. Nevertheless, many people think that the collapse on the stock exchange will cause a diminution in the demand for textile goods, particularly in the finer qualities. This development is possible, but one cannot at the moment foresee what real influence it may have on the rate of employment.

Chester Pays Mebanes Honor

Chester, S. C. — At the August meeting of the directors of the Chester Chember of Commerce this week resolutions were unanimously adopted, expressing their thanks and appreciation to Robert S. Mebane and H. B. Mebane, who recently disposed of their stock in the Republic Cotton Mills at Great Falls to the Duke interests for the lasting benefit to the progress, material development and social uplift of Chester county and South Carolina.

During seventen years they labored at Great Falls and as a result of their enterprise, ability, energy and outstanding leadership the town of Great Falls has been created into a thriving community of approximately 4,000 people with three large textile manufacturing plants, four churches, high schools and other public school buildings, improved streets and pavements, bank, mercantile establishments, movinp picture theater, railroad station, water works, sewerage and electric light plant, beautiful homes, other improvements and happy people in this short period of time.

It was resolved that the Chester Chamber of Commerce urge these gentlemen and their families to remain in Chester county and to continue as citizens of this county and to reside in the city of Chester and that the Chester Chamber of Commerce pledges to them a ready support for any business enterprise which they may inaugurate and establish here.

Poland Buys More American Cotton

Poland's imports of cotton in May, amounting to 6,334 metric tons, or about 28,000 bales, were over 70 per cent larger than in May a year ago, bringing the total for the first five months of the year to 31,607 metric tons, or about 140,000 bales. This was 61 per cent more than the figures for the first six months of 1926. By far the greater part of Poland's imports come from the United States. In the six months ended January 31, 1927, out of 174,000 bales of cotton consumed by Polish mills 164,000 bales, or about 85 per cent, represented American imports.

Poland's consumption of American cotton has been increasing steadily during the past five years. For the six months' period ended January 31, 1927, consumption of 146,000 bales constituted an increase of 64 per cent over the preceding half year. This is at a prportionally greater rate than in any of the important foreign markets for the American staple and advanced Poland from eighth to seventh place in order of importance.

The Polish market, moreover, still has considerable possibilities for expansion. The domestic industry dominates the domestic market. Imports of cotton fabrics constitute only 2 per cent of total consumption, and with a population of 30,000,000, the sixth largest in Europe, home consumption should increase substantially. Poland also is advantageously situated in relation to the markets of Eastern Europe, which take the bulk of its exports. These amount to about 7 per cent of total production and have more than doubled in the past year.—New York Journal of Commerce.

Fountain Cotton Mills, Inc.
Tarboro, N. C.

S. L. McCracken .....Superintendent
W. D. Thornburg .....Carder
J. D. Watkins .....Spinner
J. W. Giley .....Winding
J. F. White .....Master Mechanic
H. C. Cook .....Cloth Room

Double Production From Loom

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brought within reach of the open reed and from there to the fell of the fabric. From this position the combs carry the warp ends back to their original places. An increase of output can only be obtained by inserting the wefts into two sheds if these two sheds are dissolved in the same space of time as usually the binding-off of one weft would require. For this reason the combs for the warp and the open reeds are so adjusted that they are only performing short movements.

In Figure 3 it is seen that the way of the second weft to the fell of the fabric is a very short one. This weft is simultaneously inserted with the first weft into the shed, and has only to go a very short way, when the second (open) shed is being opened towards the fell of the fabric. From this illustration the advantage of inserting the two wefts simultaneously can clearly be seen.

The expert will understand from what has been explained above that with the machine described only a fabric of such binding and with not too dense a warp structure can be produced. But in these cloths, with their enormous consumption throughout the world, the keenest competition now prevails, and it has been stated that, by means of the new device, the German textile industry hopes to regain its lost markets in China and India for cover cloth from waste.

Purifying Water

(Continued from Page 10)

ant in this branch of manufacturing activity.

Water for Dyeing, Etc.

The second large line of service for water may be profitably softened consists in part of dyeing operations. However, soft water is not everywhere necessary even in the dyehouse. Some dyestuffs require the use of soft water in order that they may be advantageously applied. Others do not require it.

Associated with the softening of water for dyeing operations is the softening preparatory to washing with soap. The hardness in water operates to nullify the proper action of soap solutions. In fact, hardness has been and to some extent still is measured by this nullifying activity. The degree of hardness varies with the amount of soap destroyed or made ineffective.

Let me quote here: "When soap is added to such waters (as those containing salt or lime, magnesia and iron), no lather is at first produced; since the fatty acids of the soap combine with the lime and magnesia (as well as oxide of iron) to form sticky insoluble soaps possessing no detergent properties. No lather is produced until sufficient soap has been added to combine with the whole of the calcium and magnseium present. The soap is thus commonly said to be 'killed.' In this manner, large quantities of soap are destroyed. One pound of calcium carbonate, or its equivalent in calcium sulphate salts, dissolved in water, precipitates—and so far as its detergent qualities are concerned—destroys about 10 pounds of good average soap."

Again, "a water used for scouring yarns, . . . submitted for analysis to one of the authors, was found to contain 35 grains of calcium and magnesium salts per (British) gallon. Consequently, 1,000 gallons of this water (providing no free alkali were added as well) would destroy or render useless at least 50 pounds of good soap."

It may be gathered from the foregoing that the cost of softening of water may often pay for itself, in part, by the saving in soap. This is an important consideration.

New Statistical Handbook of the Textile Industry

Washington, Aug. 19.—To aid business executives in analyzing tendencies in production, prices, stocks, exports, etc., in the textile field the Department of Commerce has just published the Textiles Section of the Record Book of Business Statistics. In this bulletin, which will be followed by sections relating to other industries, there are presented statistics month by month from 1909 through 1926, where available, on the various phases of the cotton, wool, silk, rayon and other textile industries. The statistical data are supplemented by descriptive text illustrating the actual uses of this material by business concerns in planning sales and production policies, purchasing, etc., through the publication of these data currently in the department's monthly "Survey of Current Business."

The Record Book relates how a cotton firm uses the figures to examine business tendencies in other years where the problems and conditions are somewhat similar to those under consideration, while another firm uses extensively the data on raw cotton in studying underlying conditions and comparing price fluctuations. Other firms report that keeping track of consumption helps in purchasing, that sectional trends and activities of consuming industries are obtained through these statistical reports, or that the data are used to control purchases, dispose of stocks and rearrange the classes of production. Comparison of its own business with twenty different business series is made by another firm, resulting in the discovery of definite sequences for forecasting their own business.

The Textile Section of the Record Book of Business Statistics costs 10 cents per copy and may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C.

New England Southern Mills

Boston, Mass.—In the three months ended June 30, 1927, New England Southern Mills earned a net profit after interest and depreciation of $654, which compares with a loss (after somewhat heavier charges since the company then controlled the Cosmos Imperial Mills of Can-

ada) of $177,723 in the second quarter of 1926. For the first half of this year the company shows a loss of $11,467, against loss of $340,556 a year ago.

The above account for the second quarter of this year allows for interest charges under the present capital line-up, amounting to $218,697. If the reorganization plan, recently proposed, had been in effect during the period, interest charges, including accrued interest on proposed new notes, payment of which may be deferred, would have amounted to $151,954. Under this condition there would have been a profit of $67,397, and interest charges would have been covered with a good margin.

Under the provision of the reorganization plan, $3,244,000 7 per cent notes of 1929 and $3,500,000 bank loans would be converted one-half into new 5 per cent notes, maturing in 1933, and one-half into new 7 per cent prior preferred, and present prior preferred and preferred would each step down one position, with one share of new common given for 100 shares of old. The company is equipped with 332,000 spindles, of which 264,000 are in South Carolina and Georgia and 68,000 in New England.

Income account for the second quarter of this year follows:

Net sales	$2,838,729
Operating prof. before int. and deprec.	335,843
Depreciation	116,492
Operating profit before interest	219,351
Int., including accrual of unpaid items	218,697
Profit	654

Safeguard the Cotton

(From The Atlanta Constitution.)

The boll weevil situation in several sections of Georgia is bad.

In the southeastern section where the prospects prior to the weevil emergence were bright for a heavy acre yield, weevils are now reported in great quantities.

The weevils are plentiful in extreme south Georgia.

Southwest Georgia does not seem to be so badly infected.

There are weevils throughout north Georgia. It is not too late to save the cotton, however, if the farmers will begin a determined fight and begin now.

In the spring we stressed vigorously the prospects of heavy weevil infestation this year.

The weather conditions during the late fall and winter clearly indicated a heavy emergence.

Many farmers had become convinced, it appears, that the weevil had passed out of Georgia because for the past two years there were fewer than in the years preceding.

We warned against this fallacy. We said then, and have many times repeated—the weevils are here and will be here as long as we grow cotton.

But weevil control is not now a serious problem. It simply means hard work and the use of calcium arsenate as a poison.

Cotton prices are good and will probably get better. If the farmers will save their cotton from boll weevil destruction there will be unusual prosperity in the state this fall.

Every banker, every business man, every newspaper ought to urge this. The state agricultural college and the department of agriculture ought to urge it.

Saco-Lowell Shops

Boston, Mass.—With the improvement in the outlook of the cotton manufacturing industry, the business of Saco-Lowell Shops, manufacturers of textile machinery, has picked up considerably, and as a whole is running at the best rate for something like four years.

During the first six months of this year the company's sales were slightly better than 20 per cent ahead of the first half of last year. The various plants are operating at distinctly better ratios. At Lowell the Kitson plant is running full, as is the plant at Newton Upper Falls.

At Biddeford the company's unit is running at a much better rate than prevailing for a considerable period. Operations there average five days a week, as against but three days a year ago. The rumor has made its way into the press that the Biddeford plant is to be consolidated with that at Lowell, but this the company emphatically denies.

In view of the large amount of mill rehabilitation work which has been held up by textile adversity in recent years, Saco-Lowell Shops would appear to face improved prospects, once mill treasuries have been strengthened by a period of prosperous business. For the remainder of this year the company expects to maintain the first six months' rate of improvement over 1926. Orders now on the books will necessitate several weeks' operations at present rates.—Boston News Bureau.

Mount Airy's Newest Industry Launched

Mount Airy, N. C.—The Mount Airy Overall Company, the newest industry of this city, began operations about two weeks ago on a small scale and so quietly that it was two weeks before any one knew that it had begun work. Today a visit to the factory showed production on an increasing scale, with an output of 50 dozen overalls daily at present, and floor space enough to place between 90 and 100 machines in a short time and thereby produce between 150 and 250 dozen overalls a day.

The plant is now being operated as a department of the West-Hill Company, wholesale grocers of this city, but within a short time the overall company will be organized and a distinct business will have been established. The two officers of the West-Hill Company, J. H. Hill, president, and A. V. West, secretary-treasurer, have financed the project so far, after intensive study of the opportunities in the overall business for the past year by Mr. West.

Cotton Goods

New York.—Sales of cotton goods were moderately large during the week. Prices showed a steady rise after the higher levels reached by the cotton markets. Inquiry was considerably larger at the end of the week and buyers were expected to purchase more freely this week.

The advance in price of printed percales and other printed goods has been about half a cent a yard and higher. Denims were advanced 1 cent a yard. Many of the fancy lines in flannels were a half to a full cent higher. Sales of gray goods showed some increase on Friday and Saturday and prices were stronger. Tickings were advanced a cent a yard.

The trade showed much interest in new lines of printed and woven wash goods for the spring season, which have just been opened. Rayon mixtures are more in evidence than they were a year ago and the price range is considerably broader.

Toward the latter part of the week there were fairly large sales of print cloths and sheetings. The price tendency was upward and buyers who sought some styles for September delivery at prices paid early in the week were unable to get them. There were sales of print cloths for August and September delivery at 8¼ cents for 64x60s. Trading on 68x72s was at 9¼ cents, the supply growing less at the figure. A limited quantity of 80 squares quick were around at 10¾ cents, most mills holding for 11 cents. A fair amount of 72x76s was wanted at 10¼ cents, but the wanted deliveries could not be found, up to 10½ cents quoted. Scattered sales of other print cloths were put through at unchanged levels.

There was further strengthening in sheetings, and prices are higher on a number of styles. Some 31-inch, 5.00 yard sold at 7½, net, for contract, and certain goods were again heard at three-eigths; 5.50 yard contract sold at 7, net, and spots would bring one-eighth to one-quarter more; 44x40, 6.15 yard at 6¼, and the 40 squares count at one-eighth; 4.70 yard sold at 8, net, and a choice make brought 8¼, net. Several were quoting one-quarter on the 4.70 yard; 36-inch, 5.00 yard is quoted now at 7¾, net; 37-inch, 48 squares, 4.00 yard, sold at 9, net. For 56x60, 4.00 yard, 10, net, is quoted for October, and 9⅞, net, for November. It was understood that some nearby goods had brought 10¼, net. The 36-inch, 3.00 yard are heard at 11½ to three-quarters, net, depending upon the make; 36-inch, 3.25 yard at 10¾ to 11, net, depending upon the make; 40-inch, 3.75 yard quoted at 9¾, net, and some quote one-quarter higher; 40-inch, 2.85 yard generally quoted at 12, net.

The demand for cotton duck is more than usually limited, is the report, though occasional lots are being found first hand at slight reductions under asking price levels. The general tone of the market is strong with various mills practically withdrawn, their prices being higher than can be done elsewhere.

The market on tire fabric has held more than usually quiet during the last few days, tire companies preferring to watch cotton developments meanwhile. There is no marked movement of high pressure or balloon casings while production schedules are repotred to be seasonally reduced.

Carded broadcloths sold better in some centers than others. There are mills that complain that the recent business in 100x60s and 90sx60s has been unsatisfactory as regards both prices and volume. Present indications are that there will be a certain amount of switching of looms on these two counts over to 80x60s and 112x60s, in the near future. Both the last mentioned constructions have shown more activity during the past few weeks, generally speaking, than either of the two in-between styles. However, while the interest in the 112x60 has improved, the volume in this instance is not what could be termed large.

The business in combed goods has covered a wide variety of cloths. Fancy rayons seem to have been selling better than the plains and there are some observers who feel the market is just about to turn the corner into a broader activity in all types of fancies. But while some centers have found the plain alpacas continuing quiet following the good movement of late last month, there are some others who report fair-sized inquiry. Such inquiry included gray and plain color box loom alpacas and dobby alpacas.

Cotton goods prices were as follows:

Print cloths, 28-in., 64x64s	6½
Print cloths, 28-in., 64x60s	6¼
Print cloths, 27-in., 64x60s	6
Gray goods, 38½-in., 64x64s	8¾
Gray goods, 39-in., 68x72s	9¼
Gray goods, 39-in., 80x80s	10⅞
Brown sheetings, 3-yard	12¼
Brown sheetings, 4-yard, 36 x60	10¼
Brown sheetings, stand.	13¼
Tickings, 8-oz.	21 a21½
Denims	17
Staple ginghams, 27-in.	9½
Kid finished cambrics	8½a 9½
Dress ginghams	14⅝a16½
Standard prints	8¼

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The Yarn Market

Philadelphia, Pa.—The yarn situation has shown very little change since the sharp rise in cotton prices. The bulk of the trading has been in small lots for prompt shipment. Buyers are inclined to mark time until they are surer of the cotton situation and have been unwilling to follow the advance in yarn prices. Inquiry showed a considerable increase during the latter part of the week, but actual sales were small. Spinners have maintained prices on a very firm basis and have shown no disposition to accept the lower offers made by consumers.

It is apparent here that most yarn buyers are not convinced that cotton prices will hold at their present levels and they are therefore very slow in committing themselves to yarn purchases. They were willing last week by pay spinners prices for filling in needs but were not willing to trade ahead. They continued their hand to mouth policy and it is doubtful if they will be willing to cover future requirements until cotton conditions are more settled.

Many spinners, especially those making combed yarns, are still reluctant to quote prices. Medium counts remain 3 to 4 cents higher but there has been no further change in the finer counts.

The best demand during the week was for the coarser counts of knitting yarns, though there was some business in weaving numbers. The price situation showed considerable irregularity and most spinners and dealers regard the list as purely nominal. The price list in this market, as given below, is in many instances lower than spinners are quoting:

Southern Two-ply Skeins.

8s	30½
10s	32
12s	32½
14s	33
16s	34
20s	35
26s	39
30s	41
40s	49½

Southern Two-ply Warps.

8s	31½
10s	32½
12s	33½
14s	34½
16s	35
18s	35½
20s	36
24s	38
26s	39
30s	41
40s	50

Southern Frame Spun Carded Yarn on Cones—Cotton Hosiery

8s	30½
10s	31½
12s	32
14s	32½
16s	33
18s	33½
20s	34
22s	35
24s	36
26s	37
30s	39
40s	48

Southern Single Skeins.

4s-8s	30
10s	31
12s	31½
14s	32
16s	33
18s	34
20s	35½
22s	36
24s	37
30s	38
40s	40

Southern Single Warps.

4s-8s	30
10s	32
12s	32½
16s	34
18s	35
20s	36
24s	39½
30s	40½
40s	50

Standard Mills Adds Light Suit to Lines

Standard Knitting Mills, Knoxville, Tenn., with sales offices at 93 Worth street, have announced the addition of a spring suit line to its line of men's underwear. It is a ribbed union suit weighing approximately ½ pounds for size 42, and the standard suit will have short sleeves and be ankle length. It is to be made in both ecru and bleached yarns and will be packed in one-half-dozen boxes.

The new suit will be made in both the "H" and the "Three-Seasons" finish which have characterized the heavyweight suits heretofore made by the Standard Company. The price is to be $6 a dozen, net 40 days, 30 extra, f.o.b. mill, subject to change without notice. No extra charge is to be made for long sleeves, nor will there be any reduction on knee-length suits.

Conditions in Chinese Mills.

According to statistics published by Chinese Cotton Millowners Association in Shanghai, the quantity of cotton consumed in Chinese mills during the second half of 1926 amounted to 672,070 bales (of 500lb.). By far the largest quantity of this was Chinese cotton (421,567 bales), the remainder being divided as follows:— East Indian 173,472 bales, American 76,217 bales, Egyptian 367 bales, and miscellaneous 447 bales. Statistics for the last two years show that the use of American cotton is increasing steadily. The number of ring spindles at the end of 1926 amounted to 2,066,966 on July 31, 1926. The number of spindles now in course of erection is given as 7,600, though the data about spindles refer only to associated mills. Actually the total number of spindles in the whole of China is estimated at 3,440,000.

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Wanted

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During the three month's membership we send the applicant notices of all vacancies in the position which he desires and carry small advertisements for two weeks.

We do not guarantee to place every man who joins our employment bureau, but we do give them the best service of any employment bureau connected with the Southern Textile Industry.

WANT position as overseer carding. In present position 5 years. Personal reasons for wishing to change. Best of references. No. 5218.

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General Electric Co.
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See also Ventilating Apparatus.

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Tolhurst Machine Works

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Wickwire Spencer Steel Co.
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Fibre Baskets—
Diamond State Fibre Company

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Diamond State Fibre Company
Spauling Fibre Co.

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Hart Products Corp.
Seydel Chemical Company
Seydel-Woolley Co.
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United Chemical Products Corp
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Finishing Machinery—
——See Dyeing, Drying, Bleaching and Finishing

Flat Wall Paint—
E. I. du Pont de Nemours & Co., Inc.

Fluted Rolls—
Collins Bros. Machine Co.
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Saco-Lowell Shops
Woonsocket Machine & Press Co., Inc.
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Saco-Lowell Shops
Southern Spindle & Flyer Co.
Whitin Machine Works
Woonsocket Machine & Press Co., Inc.

Flyers—
Saco-Lowell Shops
Southern Spindle & Flyer Co.
Whitin Machine Works

Frames—
Steel Heddle Mfg. Co.

Friction Clutches—
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Garment Dyeing Machines—
Klauder Weldon Dyeing Machine Division, H. W. Butterworth & Sons Co.

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Borne, Scrymser Co.
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Harness and Frames—
——See Heddles and Frames

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Barber-Colman Co.

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Parks-Cramer Co.
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